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GEOGRAPHICAL CHANGES in the TRADITIONAL ARAB VILLAGES in NORTHERN ISRAEL

by

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PREFACE

Between 1973 and 1978, Yoram Bar-Gal and Arnon Soffer of the Department of Geography at the University of Haifa undertook a series of research projects on changes in the traditional Arab village in Northern Israel. The most important process at work in the Arab villages as shown by the research is that of urbanisation. The Arab villages cannot be thought of today as a uniform entity but as a hierarchical system of settlements undergoing a process of modernisation. At the base of the hierarchy are several small and traditional agricultural villages while at the top several settlements have distinctly urban characteristics.

This work consists of five chapters. The first describes, in a general way, the processes at work on Arab settlements in Israel in terms of their demographic structure, economic characteristics and the way in which they reflect rural development. The second chapter deals with the processes characteristic of the smaller village at the base of the hierarchy -- small villages, newly-created Bedouin settlements and those of other Arab farmers. Chapter three summarises the urbanisation process observed in a sample of medium-sized and larger settlements in Northern Israel and analyses the development of business centres in them.

The fourth chapter discusses a recent process of urban expansion that has become apparent in the 1970s. This is a situation in which a large area of the Arab settlements has been built over, giving a physical continuity to the built-up area.

Finally, Chapter five discusses the problems of producing physical plans for the Arab village and the gap that has developed between what has actually occurred in the villages and the production of physical plans for them.

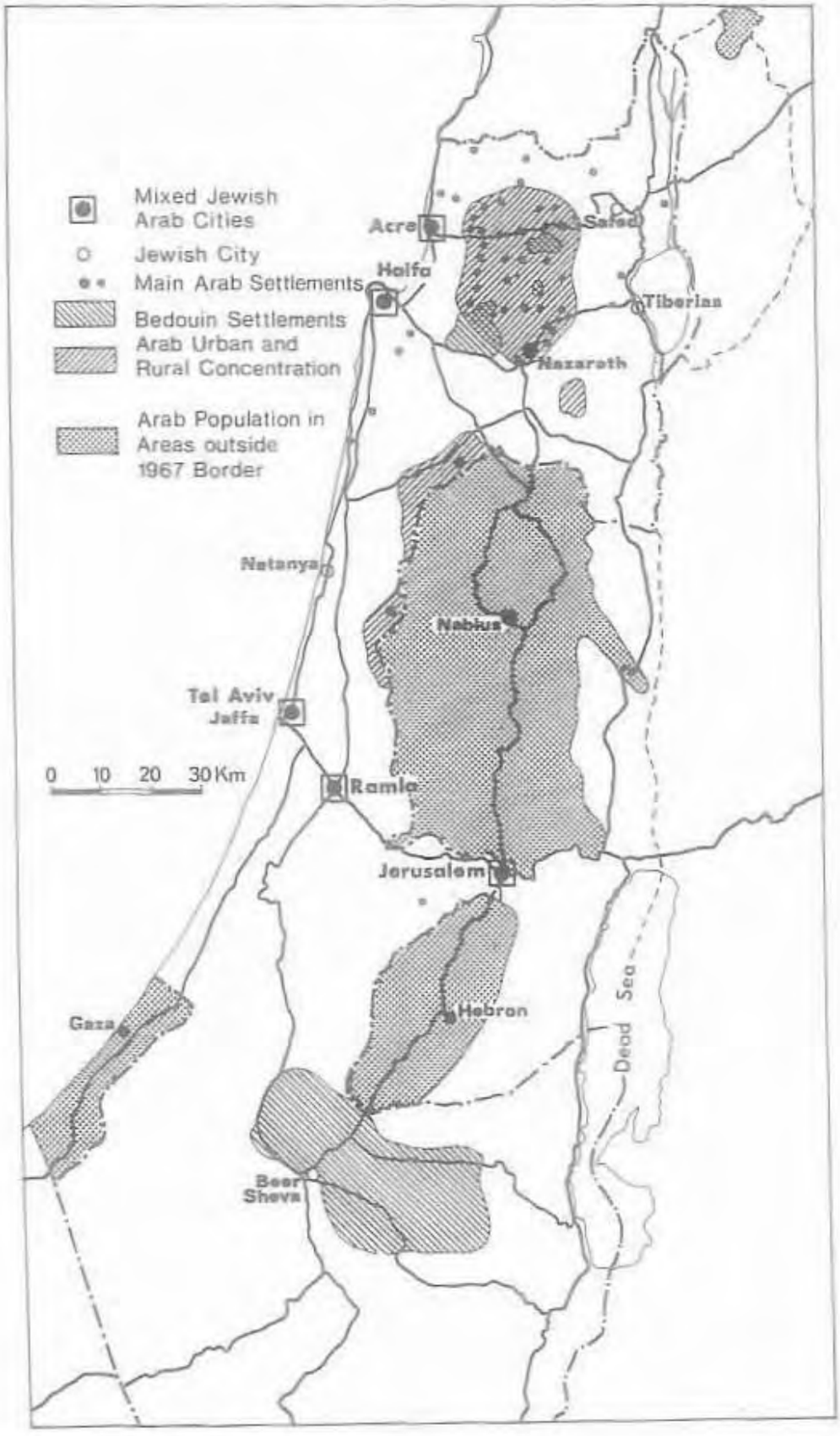

Figure 1. Concentrations of Arab population in Israel, the West Bank, Golan and the Gaza Strip

1. ARAB VILLAGES IN ISRAEL : AN INTRODUCTION

Within the borders of the State of Israel, as defined until 1967, there are today approximately half a million inhabitants belonging to Arab communities.[1] These include Moslems, Christians, Druzes and others. This population is found mainly in 110 settlements concentrated in several distinct geographical areas (Table 1, Figure 1)

The highest concentration of Arab villages is in Lower Galilee, where they are grouped around Nazareth, the largest Arab town in Northern Israel. A second important grouping in the Northern District is further to the west, east of the town of Acre. The triangle in the Central District, north-east of Tel-Aviv, in the contact zone between the hills of Samaria and the coastal plain forms another important concentration. Several other minor concentrations exist, such as Upper Galilee, the Jerusalem area, and Mount Carmel.

Most of the Arab settlements in Israel are villages in mountainous and hilly areas. This is in contrast to the Jewish population which is mainly urban and located in the Coastal Plain and the interior valleys.[2] The location of these Arab villages is the result of a settlement process continuing through a period of several centuries and influenced by factors such as soil, water, security and Mediterranean farming practices. On the other hand, settlement of the Jewish population has taken place during the past century in the lowland areas, avoiding the hill regions in most cases.

Changes in Arab villages

In most Arab villages in Israel today, several changes can be observed, which may be summarized as follows:

(i) Changes in the built-up area of the village

(ii) Changes in village technologies

(iii) Functional changes in the village

Changes in the built-up area

Most Arab villages contain an old, traditional village core. This densely-populated core in the centre of the village developed slowly through time and its structure is adapted to the traditonal needs and livelihood of the inhabitants. The core was inward-looking, the high density a result of the weak security conditions extant in Palestine at the end of the Ottoman

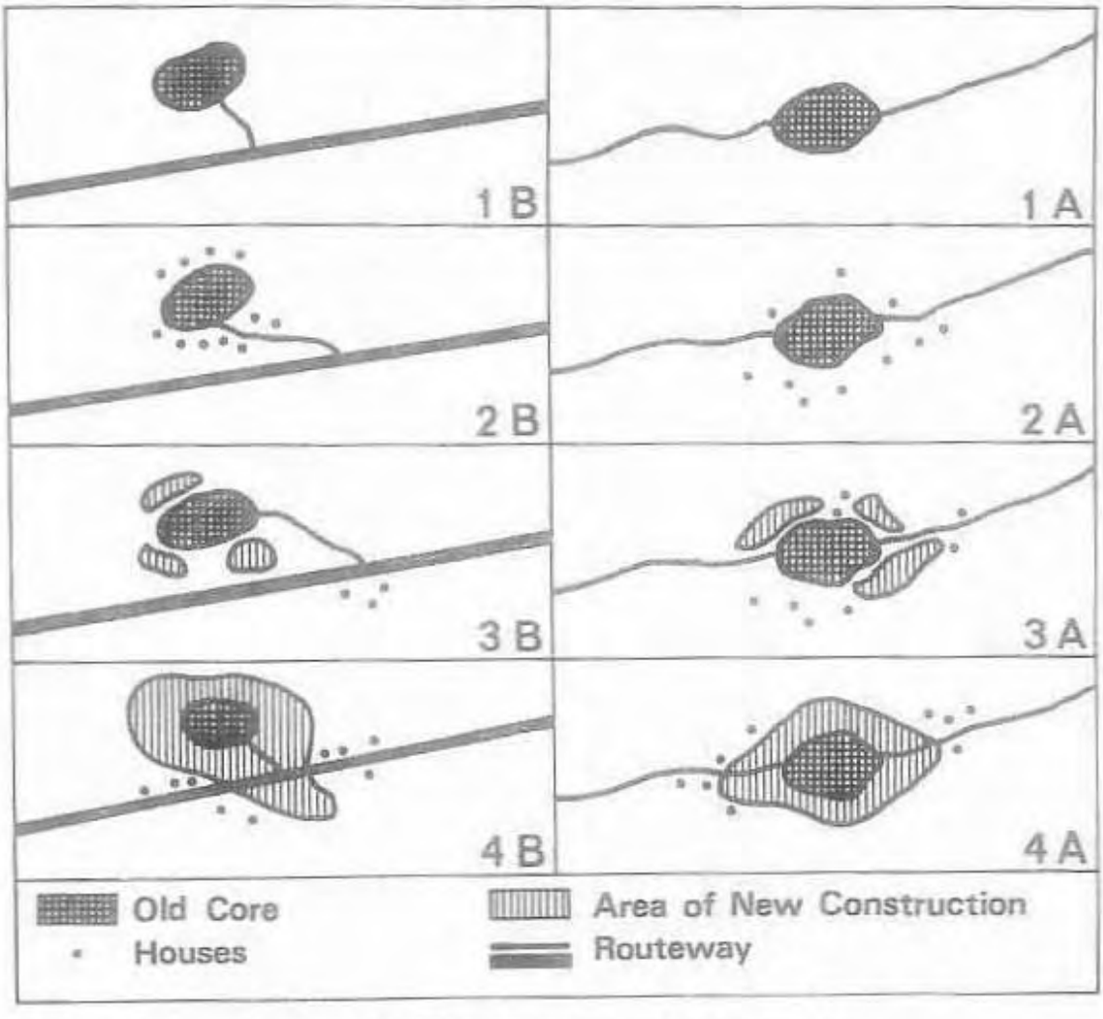

Figure 2. Spread of built-up area in the Arab village

period. Most of the new building in that period was undertaken within the village nucleus and not outside.

In spite of the disorganized and dense physical structure of the core and its narrow streets, the social structure was clearly defined. In accordance with the influence of traditional society, homogeneous residential areas were formed in the core area, based on religious and family affiliations (nuclear families).

During the British Mandate (1920-1948), this structure began to change. The process began with the outward movement of some inhabitants, who built houses in the fields some distance from the core. The relative quiet in the country at that time (Pax Britannica) facilitated this movement. At the same time, population pressure forced the village core to spread slowly outwards as building took place beyond the confines of the traditional built-up area (Figure 2).

Since the foundation of the State of Israel, this process has spread so that, in most of the villages today, the traditional village core comprises only a portion of the built-up area. The current alignment of the village consists of new neighbourhoods surrounding the core. These neighbourhoods are generally more developed along the roads leading to the settlement. A small proportion are planned neighbourhoods, but most have grown independently of any plan. Density is considerably lower than in the centre of the village and these neighbourhoods cover a wide area, thus enlarging the built-up area of the village. In most instances the villages spread radially. In some cases, the expansion was stellar as in 'Illabun, M'jar and Beit Jann. In a large number of villages the growth was linear, either because of difficult topography as in Yirka, Deir Hanna, and Kabul or along routeways as in Sakhnin and Shefar'am. In cases where population growth was two and a half times the average for villages, the built-up area of the village exceeded the average figure by a factor of seven, and in certain instances by a factor of fifteen or eighteen.

The social structure in the new neighbourhoods is different from that in the traditional core. The structure of the hamula (extended family) has vanished and, in several cases of mixed villages (Moslems, Christians and Druzes), even the religious structure, which was clearly evident in the core, has gone. On the whole, these neighbourhoods are populated by younger families. Outside the main built-up areas of the core and neighbourhoods are several isolated buildings comprising the third element present in the built-up area of the village. These can

TABLE 1: DISTRIBUTION OF ARAB POPULATION IN ISRAEL (1977)

District	Number of settlements	Percentage of all Arab settlements in Israel	Population (000)	Percentage of total Arab population in Israel
Northern	71	61.7	260.3	46.9
Haifa	24	20.8	88.4	15.9
Central & Tel Aviv	13	11.3	61.9	11.2
Southern	1	0.8	40.9	7.3
Jerusalem	6	5.2	103.4	18.6
TOTAL	115	100	555.0	100

Source: Central Bureau of Statistics, Statistical Abstract of Israel, 1977, 23, 26

TABLE 2: DURABLE GOODS OWNED BY ARAB FAMILIES IN ISRAEL

Goods	Year	Percentage of total Arab families
Telephone	1969	3.4
	1974	7.0
Radio	1959	38.1
	1974	69.9
Television	1965	2.4
	1974	46.2
Private car	1970	3.1
	1974	11.5

Source: Central Bureau of Statistics, Statistical Abstract of Israel, 1977, 291-2

be seen as a continuation of the spread of the population beyond the new neighbourhoods, as a result of such factors as land ownership and proximity to farm lands.

Technological changes in the village

In addition to the easily identifiable changes in the structure of the village are the changes in technology, among which those in building style and materials stand out. The new house styles are more modern in form and plan.[3] The functional division of the rooms includes living room and bedrooms, kitchen and utility rooms and is in contrast to the traditional house in which the internal plan was based on a single large hall. Traditional building materials have given way to materials which, until very recently, were foreign to Arab villages. In place of local stone, use is made of concrete blocks, cement and tiles. These modern structures are typical of the new neighbourhoods but they are also present in the core, parts of which are undergoing rebuilding.

An additional technological development is expressed by the modern infrastructure of the village. In the traditional villages, the infrastructure was suited to the way of life. The narrow and winding road network was suited to pack animals, to pedestrian movements between the house and fields and for communication between adjacent villages. At the same time, the unpaved road served as a drainage and a sewage channel. Technological advance into Arab villages, mainly the automobile, has brought about renewal, widening and filling-in of the road network so as to make it more appropriate to motorised movement (Table 2). As a result of the character of the old village core, there is an imbalance between the needs of transportation and the ability to develop the road network.

The creation of a new road network is not the only technological advance, for in addition there have been advances in other spheres such as water, electricity, sewage and telephone infrastructure. With piped water reaching most houses, the water deficiency has come to an end and with it the need for pumping from wells in the courtyard or from the village spring. Labour, mainly female, was thereby freed from the chore of transporting water to the houses, a chore which used a considerable portion of their time. The coming of electricity is as important as the provision of running water. The rise in private energy consumption (light, and household appliances) has brought about the linking of over 90 per cent of the villages to the national electricity grid, and has thus made

possible the development of mechanisation in the village. These technological changes have brought about the relatively rapid acquisition of durable goods. (Table 2).

Functional changes

While changes in the structure and form of the village stand out because of the rapidity and clarity with which they gain expression in the landscape, functional changes are not as prominent. These developments have come about more recently than the landscape changes, but their importance for the future is considerable.

The traditional village was based on the connection between home and field. The population, which was mainly engaged in subsistence agriculture with only a small proportion in commercial agriculture, did not develop community services, except for religious purposes or for agriculture, such as water, pools, threshing floors and flour mills. Various factors have brought about a weakening of the connection between house and field. The population began to develop conditions for the introduction of new functions into the village, such as private and public services like shops, most of which were general dry-goods stores and foodshops. The public services reaching the village by way of deliberate action include schools, labour exchanges, municipal government, baby clinics and various clubs. These functions make the Arab villages, especially the larger ones, quite different from the traditional village in that they have become central places.

Factors influencing changes in village structure

Growth of the Arab population

One of the most important factors in the development noted above is the demographic factor -- the rapid growth of the Arab population in Israel (Table 3). Such rapid population growth during a short time span (a trebling of the population in under thirty years) represents one of the highest growth rates in the world. Apart from a few thousand individuals who arrived in Israel as a result of family reunification schemes, the main source of this population growth is natural increase and the Arabs added as a result of the annexation of East Jerusalem in 1967.[4] Since the first census in 1922, there have been no substantial changes in the fertility pattern of this population and the annual birth rate has remained between 45 and 50 per thousand. In contrast to this, mortality rates

TABLE 3: POPULATION GROWTH OF ARABS IN ISRAEL, SELECTED YEARS

Year	Population (000)	Natural growth rates (per thousand)
1948	156.0	-
1951	173.4	37.7
1955	198.6	37.4
1960	239.2	42.8
1965	299.3	44.6
1970*	440.1	39.1
1977*	555.0	38.4

* Includes the Arab population of East Jerusalem

Source: Central Bureau of Statistics, Statistical Yearbook of Israel, 1978, 42, 64

TABLE 4: FORECAST OF ARAB POPULATION GROWTH IN ISRAEL, 1983-1993 (THOUSANDS)

Population group	1983	1993
Moslems	575.5	858.6
Christians	101.0	122.0
Druzes	57.9	82.6
Total	734.4	1,062.8

Source: Central Bureau of Statistics: Forecast of Israel's population to 1993, 47

have fallen constantly and rapidly as a result of improved health services (births take place in urban hospitals and infant mortality is uncommon) and of the youthful structure of the population. Mortality rates are now in the range of 6.2-6.5 per thousand. The difference between the high birth rates and low death rates accounts for the rapid population growth (Table 3). Although there is a tendency among Christians and the better-educated toward smaller families, their relative weight in the total population is small so that they have only a small influence on the general growth rates. The differences between the natural increase rates of the various Arab groups are reflected in the following statistics which show that annual natural growth rates for Moslems are highest, at 40-43 per thousand; Christians have growth rates of 18-20 per thousand whereas Druzes have averaged 35-38 per thousand. The corresponding figure for the Jewish population is 17 per thousand. These trends have brought about a rise in the proportion of Moslems in Israel's Arab population, a trend that is likely to continue (Table 4).

Moreover, as this population increase is mostly rural, it is a direct component in the demand for housing in the villages for, with a rise in population pressure, the rate of construction increases and the built-up area of the village expands. Population growth, changes in housing habits and the high price of building land in the village centres, which is marked because of the rise in demand for housing, all encourage the change in direction of village construction from the centre outwards towards the periphery, creating the new neighbourhoods which are characteristic of the new structure of the traditional village.

Lack of population movement from the village to the city

Whereas in many rural societies high natural growth rates bring migration to the city, there is little rural-urban migration among Israel's Arab population. Why then, has this migration not taken place?

The political conflict and the social and cultural gap between the predominantly rural Arab population and the mainly urban Jewish population has prevented any large scale migration to the cities. Most of the urban centres are Jewish and thus when migration does take place, it is towards Arab neighbourhoods in mixed cities such as Haifa, Acre or Jaffa, in addition to Nazareth.[5] Secondly, family relationships in the traditional society do not encourage migration to the city. Even the current

crisis in traditional society and the intergenerational struggle is not yet sufficiently great to force a cutting-off of relationships with the village and migration to the cities.[6] Thirdly, the small size of Israel and the excellent transportation facilities between the villages and the cities serve to shorten the distance between residence and place of work in the economic core areas. Thus the need for mass migration has not come about. Furthermore, the high price of housing in the cities as compared to that in the village also does not encourage migration to the city.

It thus appears that residential conditions and social factors encourage the Arab population to remain in the villages, even though the principal areas of employment are outside the villages. From these "dormitory villages", daily commuting to the place of work is a characteristic. More than 60 per cent of all employees in the Arab villages are commuters, concentrated in certain economic sectors. This commuting brings about contact between the Arab and Jewish populations. There is little doubt that a substantial number of the changes in the Arab village today are a result of the influence of the urban Jewish society on the traditional rural society. The villager returns to his village with money, economic expectations, a lifestyle and social ideas which are expressed in the demand for the development of the village infrastructure, such as in the electricity network, roads, increase in car ownership and in a change in building styles.

Changes in employment and rise in living standards

The second most important change alongside population growth in the villages is that of employment structure.[7] This makes a substantial contribution to the developments in the village that have already been noted. Whereas in the traditional village the Arabs were employed in agriculture, today the proportion employed in agriculture is very small and the population has turned to other activities for which there is a greater demand in the Israeli economy and which provide a higher income than agriculture.[8] Agricultural employment has declined from approximately 60 per cent in the early 1950s to less that 20 per cent in the early 1970s, with most of the shift into construction and services. The decline of agricultural employment is brought about by the character of the Arab villages, such as the small proportion of the area that is irrigated, subdivision of landholdings, complications in land registration and competition with the highly developed Jewish agricultural sector. The absorption of labour outside the village is linked to the rapid development of the Israeli economy and the demand for labour thus created, mainly in

construction and services such as garages, fuel-stations and restaurants.

These changes have taken place in two main periods. The first was during the late 1950s when the Military Government Administration was abolished. This had made the mobility of the Arab population difficult and prevented daily commuting. The second was at the end of the 1960s, following the Six-Day War. This period saw the beginning of an economic upswing, a rise in Jewish immigration, and an increase in the demand for housing. All these factors reinforced employment demands and permitted the transition from agricultural labour in the village to other work outside.

This change in employment structure has had deep implications for many areas. In addition to commuting as a central factor in the movement of population in the Arab villages, there are social and economic effects. The non-agriculturally employed channel a large source of money to the villages, bringing about a continuous rise in the standard of living. It is worth noting that the typical rural family consists of several wage-earners (a result of family size) and therefore the main family income is high. With a rise in the standard of living there is an increase in the demand for personal and welfare services and also for the development of business establishments within the village, such as shops, insurance and other agencies. In this way, the change in employment structure affects the very being of the village in bringing about functional changes which convert the traditional village into a settlement with a rather special urban character.

Factors impeding village development

Why is the process of change unequal in the different villages? The answer is complicated and has not yet been examined in sufficient detail, but several ideas that offer possible hypotheses can be put forward.

It is clear that there are several factors that slow down change. When these factors are strong, the changes are felt less extensively. Some of these factors, such as the location of the village and its initial size are relatively objective. For instance, villages located in remote areas, in mountainous regions and far from large centres will encounter many more difficulties in the development process. The initial size of the village is a factor by virtue of the fact that large villages have a greater likelihood of developing than small villages numbering only a few hundred inhabitants.

However, more important in retarding change are subjective factors involving the Arab population in Israel, such as its social structure, its values and approaches. In many instances, this society is still built upon the foundation of the hamula (extended family) in which there is considerable rivalry for position amongst the various component families, a factor which detracts from the development of the village. Examples of this abound. The bringing of electricity and piped drinking water or the surfacing of internal roads demands municipal organisation or the establishment of co-operative societies in order to act as co-ordinating agencies with the appropriate authorities. Establishment of such bodies is hindered in many instances by internal conflicts and rivalries. The attachments and loyalties of the population are still toward the extended families and only after that to the village as a whole.

The approach adopted by the Arab population towards investment also prevents more extensive change. There are almost no examples of local capital being invested in industrial development in the village. Most of the capital invested goes into residential building, consumer goods and, in certain instances, real estate. However, some families plough their resources into the development of the farm as in the purchase of new equipment and in mechanisation, but this is not typical.

To a certain degree, there is also a lack of investment by public bodies, government and other sectors in the Arab villages.[10] The existing investments are mainly in welfare services such as schools, clubhouses and health services. There is little investment in productive ventures. In recent years, as a result of public initiative, several textile plants have been established in the Arab villages.[11] The aim of this has been mainly to provide work for female labour, but these efforts have been only the first signs.

Notes

1. Throughout this monograph, the term 'Arab' includes Druzes and Circassians as well as Moslems and Christians.
2. Amiran, 1973
3. Segal, 1967
4. Ben-Amram 1965; Ben Porath, 1972, 1973; Abramson, 1976; Ginat, 1975; Hirshberg, 1950
5. Gradus, 1971
6. Carmi, 1974; Kanaana, 1975; Rosenfeld, 1976
7. Sahlka, 1976
8. Pohoryles, 1973; Arnon, 1971
9. Ben Shahar, 1972
10. Shidlovsky, 1965

11. The Government did not aid the industrialisation of Arab villages in the same way as it did not aid the industrialisation of Jewish villages. Today, the law requires land for industry to be designated in each village. Financial and other aid to the village industrialisation process is given and the result is hundreds of plants (mostly small) throughout the Arab village sector.

TABLE 5: THE ARAB POPULATION BY SETTLEMENT TYPE, 1977

Settlement type	Number of Settlements	Population	%	Mean population per settlement
Urban settlements	26	334,300	61.1	13,050
Large villages	32	114,400	20.6	3,575
Small villages	56	16,500	8.4	830
Very small villages	(19)	(6,800)	(1.2)	(357)
Bedouin and others	-	54,300	9.9	-
Total	115	555,000	100.0	

Source: Central Bureau of Statistics: Statistical Yearbook of Israel, 1977; List of settlements, 1977

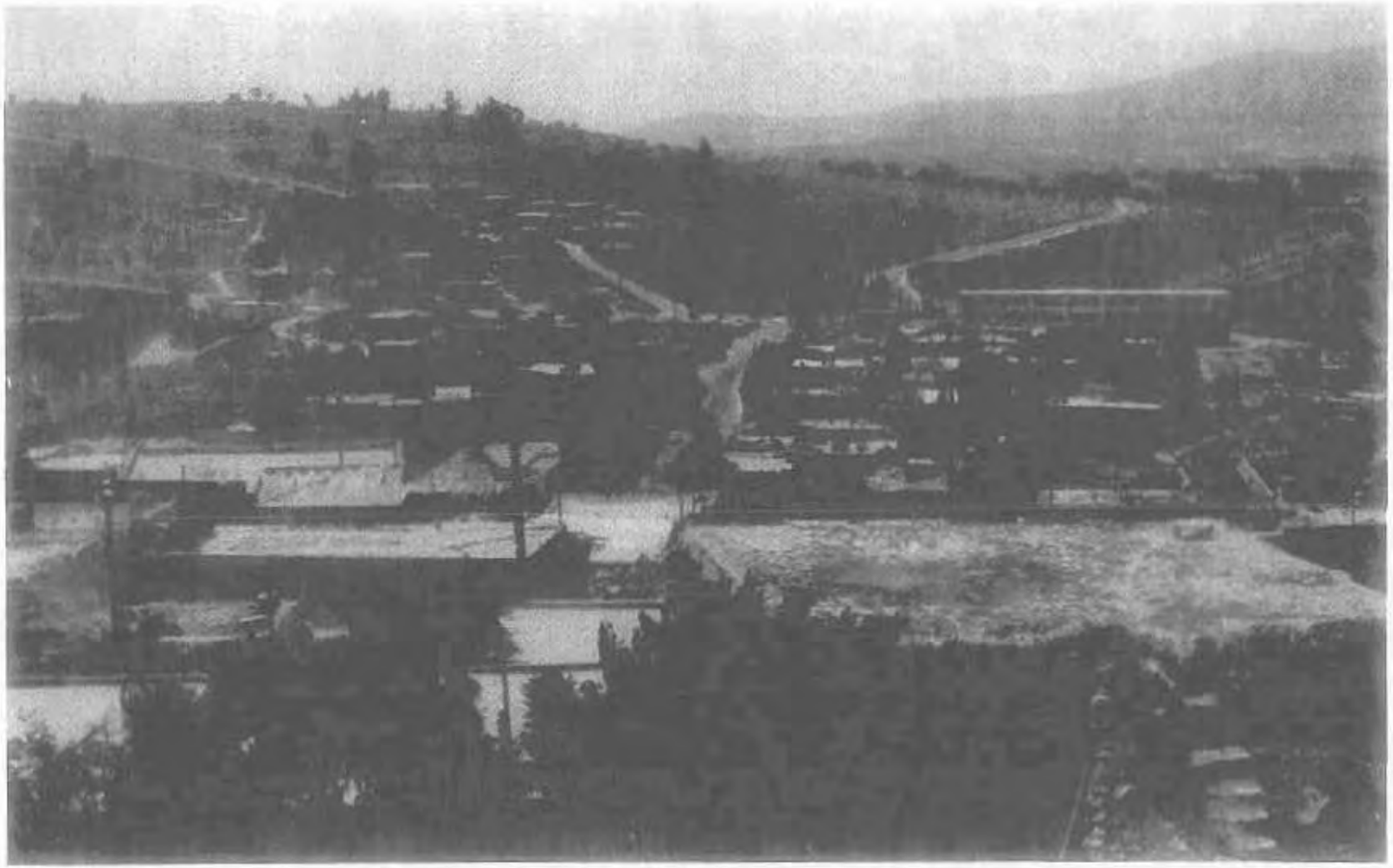

Plate 1. Jish, in Upper Galilee, General view in 1978. On the left a Bedouin quarter and on the right an elementary and secondary school. (photo: Arnon Soffer)

Plate 2. Jish, in Upper Galilee, General view in 1950.
(photo: Israeli Press Bureau)

Plate 3. Jish, General view in 1978 (photo: Arnon Soffer)

2. SMALL VILLAGES AND NEW ARAB SETTLEMENTS

The rapid development of the Arab sector in Israel is likely to create the mistaken impression that all the villages are growing and becoming intermediate or large in size. In fact, in contrast to the tremendous growth of many settlements, there is still a group of small villages, some very small, which are not growing. These villages and other small agglomerations of buildings that do not have municipal status are present in many places throughout the Arab areas in Israel. In this chapter, three phenomena connected with these settlements are presented. These are the small villages, the spontaneous settlement of some farmers in their lands outside the village proper and the sedentarisation of Bedouin in Northern Israel.

The small village

As illustrated in the first chapter, one of the outstanding characteristics of the Arab sector is the rapid growth of the village at annual rates of 4-5 per cent since the foundation of the state. As a result of this, most villages have developed and many have become large settlements, with populations of over 13,000. But, alongside this phenomenon, there is a small group of settlements, with populations of less than 500, the development of which differs from the typical situation (Table 5).

Villages in a state of demographic stagnation or even decline have been recognised throughout the world, mainly in more developed areas[1] including the Jewish sector in Israel.

In Israel, the small Arab village stands out because of its very difference from the rest of the villages in the Arab sector. This sector is characterised by an almost total lack of migration from village to town or from village to village and has growth rates that are amongst the highest in the world.

In order to explain this phenomenon of the small village, several possible contributory factors can be put forward.

a) In contrast to the general state of affairs in the Arab sector, outmigration from the village is taking place. Possible reasons for this include particularly difficult geographical conditions and serious internal conflicts within the village.

b) The settlement is relatively young and the initial population is small.

TABLE 6: THE VERY SMALL VILLAGES OF NORTHERN ISRAEL - BASIC STATISTICS

Village	Community	Religion	Comments	Population 1956	61	68	72	Growth % 56-61	62-68	69-72
Dahi	Arab	Moslem	Former Bedouin	140	175	210	211	5.0	2.8	0.1
Taiyhe	Arab	Moslem	Former Bedouin	297	310	443	483	0.8	1.5	2.2
Tamra	Arab	Moslem	Former Bedouin	180	234	367	409	6.0	8.1	2.1
Ein el Asad	Druze	Druze		216	257	359	375	3.7	5.6	1.1
Akhbara	Arab	Moslem		304	313	350	298	0.6	1.6	-3.6
Rummana	Arab	Moslem		106	126	192	226	3.7	7.4	4.4
Rihaniya	Circassian	Moslem		303	346	419	450	2.8	3.0	1.8
Jurdeih	Arab	Moslem	Bedouin	-	302	-	88	-	-6.4	-
Ramat Haib	Arab	Moslem	Bedouin	-	419	-	397	-	-0.4	-

The mean annual growth rate in the Arab sector between 1956 and 1961 was 4.3 per cent, between 1962 and 1968, 4.1 per cent and 1969-1972, 3.9 per cent. In the Circassian village of Kafr Kama, the growth rate between 1971 and 1972 was only 1.4 per cent

Source: Central Bureau of Statistics, List of Settlements

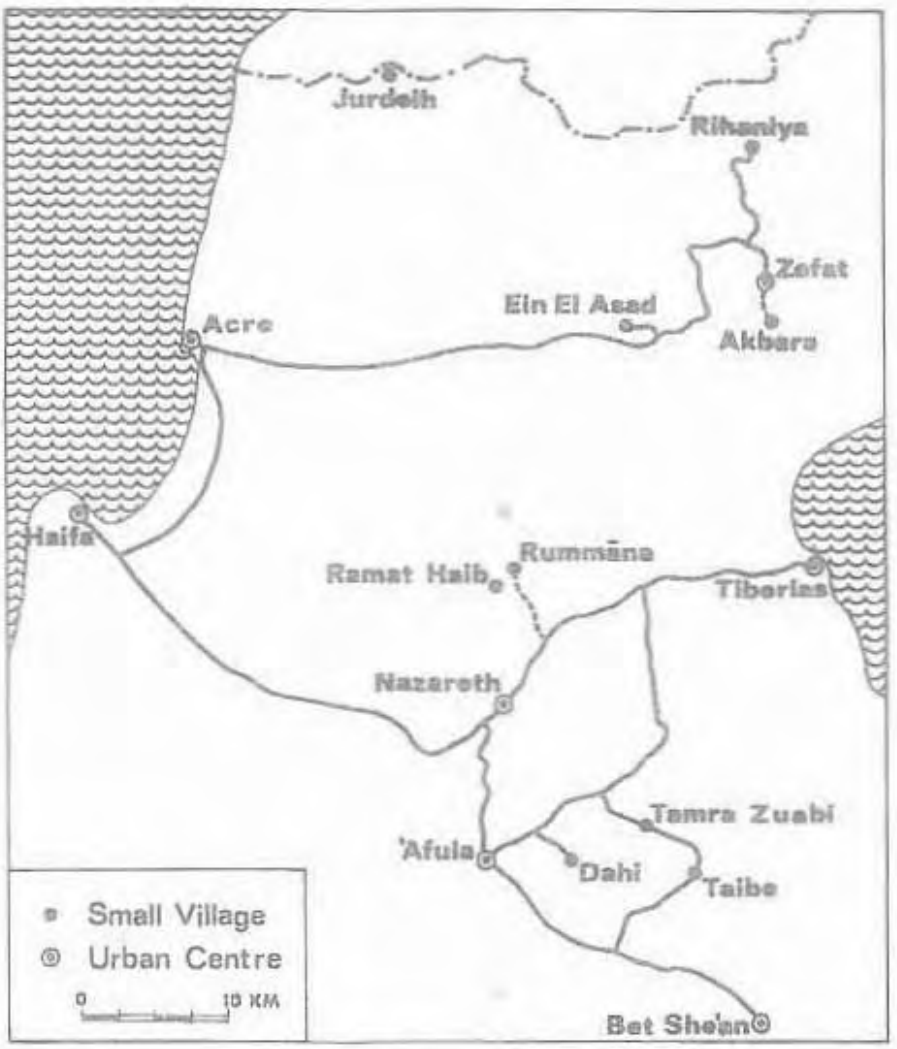

Figure 3. Location of small villages in Northern Israel

c) There is a continuation of an established village (over fifty years old) of small initial size and low rate of natural growth in comparison with the Arab sector as a whole. The settlement is small because population has been transferred from it to other places.

Nine of the nineteen small villages in Israel are located in the Northern District, of which seven are long-established, existing for many years before the foundation of the State, and two are now permanent Bedouin settlements.

The small villages in Northern Israel were examined more closely. Table 6 summaries some of the basic statistics for these villages (Figure 3). An examination of these shows that, for some of the small villages, growth rates resembled those for the large villages. Of the nineteen small villages in Israel, twelve grew at a rate similar to that of the whole population. The small size of these villages can thus be explained by their low initial population, i.e. a small population in 1948. The Northern District also contains the seven small villages which grew at a different rate from the remainder of the Arab villages, especially noticeable in Dahi, Akhbara and 'Ein El Asad. Some of these are settlements of former Bedouin who have become sedentary. Three of these Bedouin settlements are associated with a single family, the Zu'abi, which appeared in Galilee in the seventeenth century.

Has the remote location of the small villages affected their development? The three villages of Dahi, Akhbara and 'Ein El Asad are located in areas of difficult topography in terms of potential expansion of the village. They also lack easy access routes and have a very small potential for developing agricultural land. The villages of Rihaniya and Rummana have suffered in the past from poor access routes and it is reasonable to assume that this also prevented their development during the Mandate period and even before. Today, however, access to these villages is adequate. Even though it is possible to find a connection between the small size of certain villages and remote locations, it has not yet been shown that this connection is in itself an explanatory factor. Moreover, even if this connection can be proved, there are large villages with similar location characteristics, a factor which prompts an investigation to uncover further factors. In order to examine the other possible factors explaining lack of development, the village of Dahi was chosen for more detailed study, as a representative of this group as a whole. Its topography is difficult, it is the smallest village of all and it represents the group of former Bedouin settlements which comprise an important part of this group as a whole.

A detailed analysis of Dahi shows that the village developed much as the rest of the Moslem villages until 1950. It underwent difficulties between 1950 and 1970, which still affect its development in the 1970s (Table 7).

The survey showed that nine families (totalling together approximately 200 individuals) left the village in the difficult years, six moving to Nazareth, and the remainder to the villages of Na'in, Ne'ura and Iksal.

The lack of water, access roads and agricultural land close to the village are facts which explain the extent of the social and economic backwardness of the village in comparison with the rest of the villages in the area. This backwardness is expressed in housing standards, automobile ownership, levels of education, employment structure, income levels, level of agricultural cultivation and the small number of commuters.

In addition to the physical factors which determined the character of the village and acted as a basis for migration there are kinship connections between Dahi and several other Eastern Lower Galilee villages in that they are settlements of former Bedouin belonging to the Zu'abi clan, descendents of which also live in Nazareth. It is possible that this kinship connection acts as an important factor in permitting outmigration from the village and absorption elsewhere, a factor almost totally absent from other villages.

The phenomenon of the small village can thus be summarised as follows:

(i) It is a marginal phenomenon with regard to the total number of inhabitants, but includes 15 per cent of all the Arab villages in Israel.

(ii) In two-thirds of the cases, the most plausible explanation is their origin as daughter settlements of larger villages or as small settlements in the past. Today, natural growth is the same as in the remainder of Arab settlements.

(iii) In only two instances, the small size is related to net out-migration, in the case of Dahi, to Nazareth and in the case of Akhbara to neighbouring villages.

(iv) There is no clear-cut answer to the hypothesis that internal family conflicts caused out-migration.

What is the likelihood that this small village phenomenon will

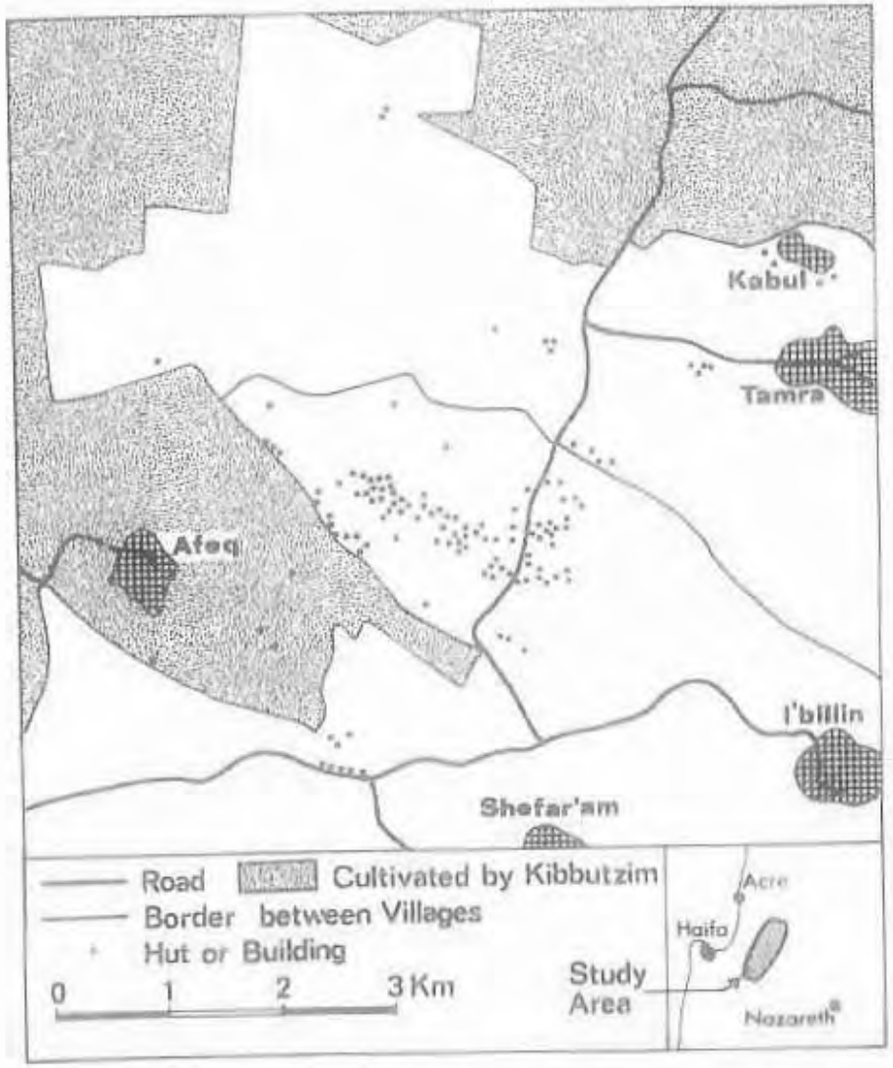

Figure 4. Spread of huts and buildings in "Zevulun plain" at 1967

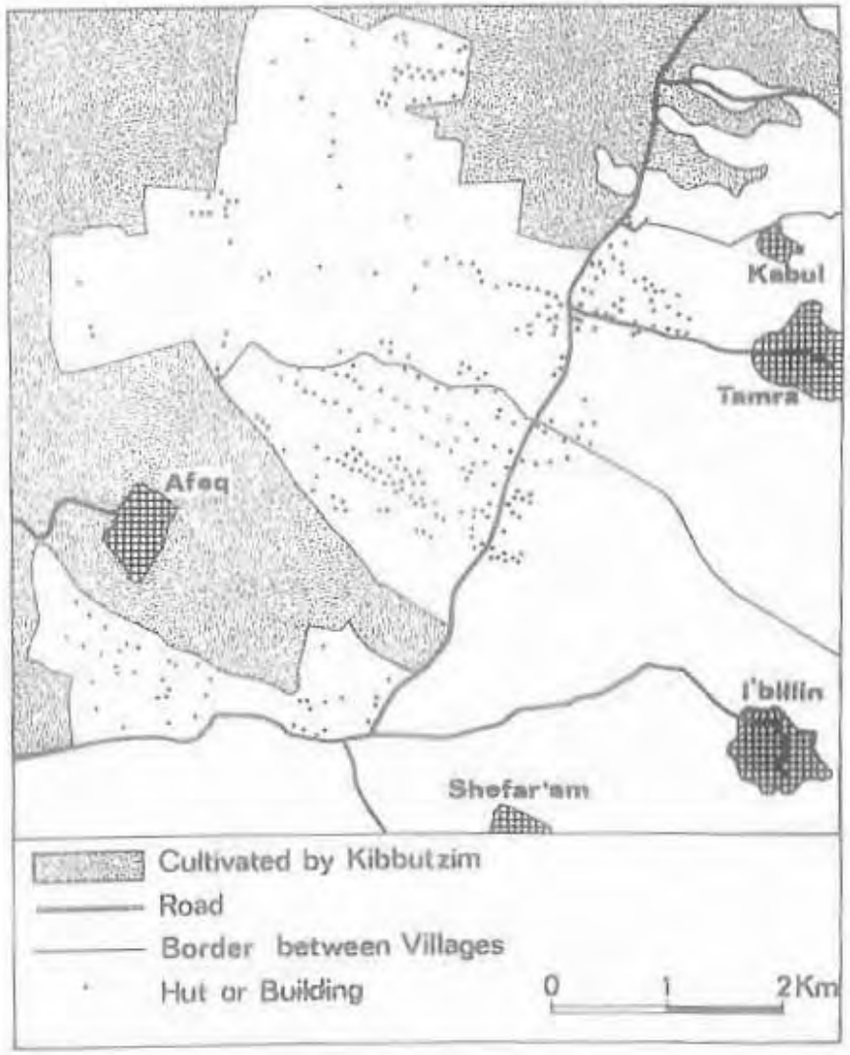

Figure 5. Spread of huts and buildings in "Zevulun plain" at 1978

vanish from the Israeli scene? Owing to population growth and a general lack of out-migration, most of the villages discussed above will reach a population of 500 inhabitants in the near future and will be able to improve the minimum standard of services. Will new small settlements grow up as a result of new settlement on the land? This question is covered in the following sections, which deal with spontaneous agricultural settlement on the land and Bedouin sedentarisation in Northern Israel.

Spontaneous agricultural settlement on the coastal plain

In the area stretching south-eastwards from Acre, in a zone of contact between the hills and the plain, hundreds of huts and other temporary structures, all surrounded by much economic activity, can be distinguished. This scene appears to be the spontaneous growth of new settlement. The phenomenon is also known from other parts of Israel, such as Nahal'Iron[2] in the spread of daughter settlements from an existing settlement or in the Hebron Hills in which the daughter settlements are separated from the original settlement.[3]

In order to describe and explain the character of this phenomenon in the Zevulun Plain, three components were examined.

(i) the characteristics and quality of the settlement landscape;
(ii) the population and its character;
(iii) the character of economic activity.

The settlement landscape

In an area of 3,000 ha, there were, in 1978, approximately 450 structures built of various materials, such as stone, wood and corrugated metal. In 1967, there was perhaps a third of this number (Figures 4,5). On first appearances the distribution of these structures appears random but, on closer analysis, it is governed by certain principles.

First, the buildings are mostly on the plain and do not extend up the hills. Second, they extend in a ribbon along the main Ahihud-Qiryat Ata road. Third, a large number of buildings also extend along the main dirt roads at right angles to the main road. Finally, the structures are located within the administrative areas of three Arab settlements, Tamra, I'billin and Shefar'am. The distribution of buildings amongst these three settlements is far from even.

Tamra exhibits the most dynamic development. In 1978, there were approximately 200 structures, ten times the number in 1967. However, they were located in three separate areas:

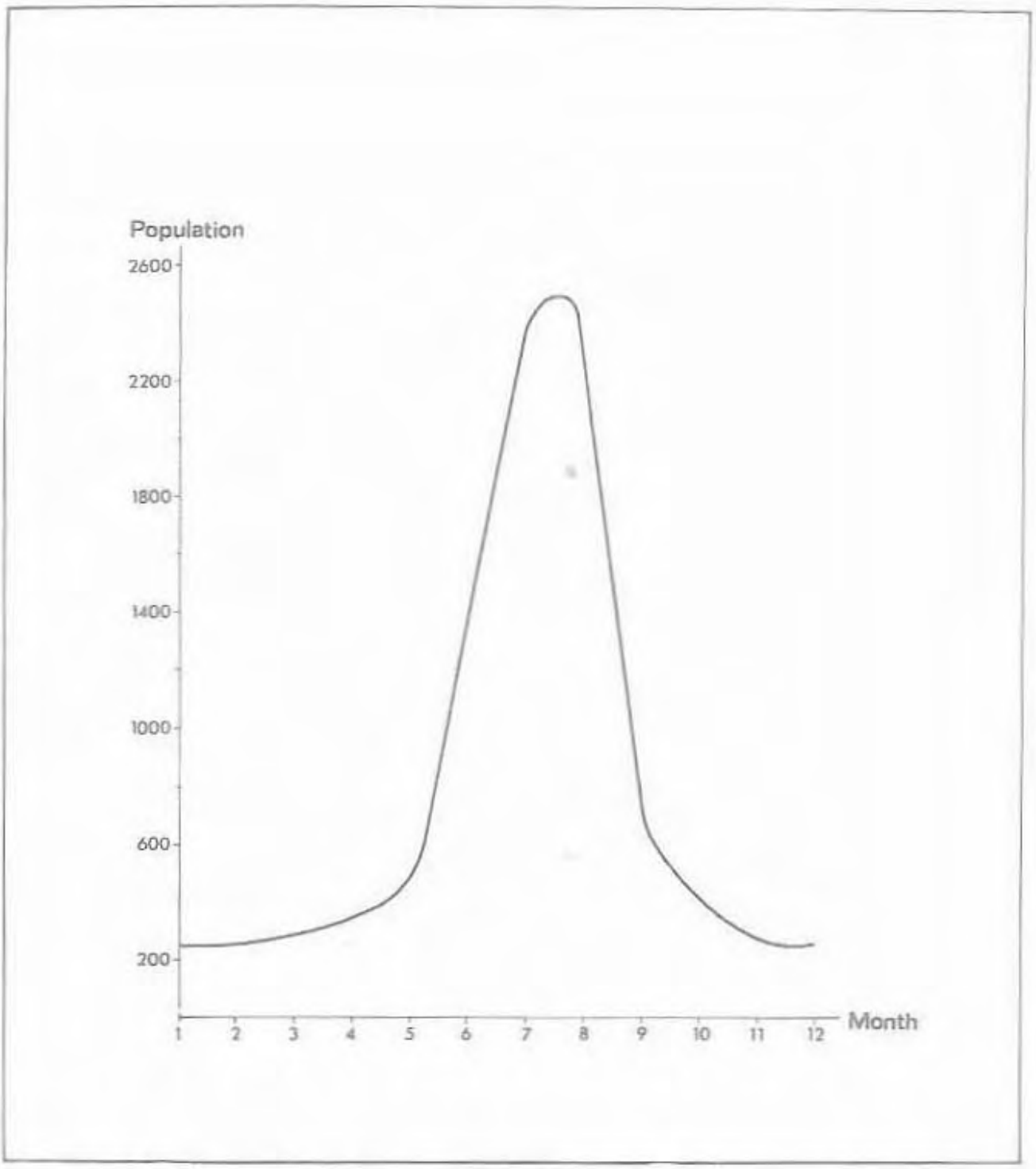

Figure 6. Population change in the Zevulun Plain during a single year

one group of structures appeared along the main road; the other two are at some distance from and parallel to it. Similarly, I'billin has about 200 structures, double the total a decade before. In this case, they are dispersed throughout the whole area, with about 40 percent straddling the track which crosses the village land from east to west. Finally, in Shefar'am, 50 buildings (a fivefold increase) are located in two separate concentrations.

The settlement pattern is dispersed and is thus unusual for the area as a whole, as the majority of both Arab and Jewish settlements are clearly nucleated. Surrounding each of the structures are agricultural lands which are intensively cultivated. In addition, the landscape contains many agricultural implements and machines, such as tractors, pick-up trucks and jeeps, all testifying to intensive economic activity.

The population and its characteristics

In the summer of 1978, approximately 2,000 individuals lived in these structures, whereas in winter less than 10 per cent or only forty-five families remained. Thus, seasonal residence is the rule, including a maximum in June-September and a minimum in December-March (Figure 6). About eighty of these structures were built by refugees from former abandoned villages on State Lands[4] located within the administrative areas of the three villages concerned. There are only six Bedouin families in the area, located on hills between Tamra and I'billin all from the Yodfat region. The seasonal movements thus have complex explanations, climatic, economic and settlement.

The climate permits the cultivation of summer vegetables in the region. Such cultivation is labour-intensive and encourages residence in temporary buildings (or in the open) close to the plots of land. In addition, at the conclusion of the school year, children also move down to the Coastal Plain to help with agricultural work, whereas in September they return to the villages with their parents. During the transition periods in spring and autumn, there is daily movement, with many of the adults working all day in the fields and returning to the village at night.

The forty-five families living permanently in the cultivated areas are in part refugees or Bedouin and in part villagers who have, for various reasons, decided to distance themselves from the village. This happens, for instance, in cases of inter-clan rivalry or fear of blood feuds, or in cases of individuals holding parcels of land which were intensively cultivated even before the Israeli period thus requiring their presence on the land.

Character of economic activities on the Plain

The principal activity is agriculture, but this is by no means the only source of income for these families. Many adult males commute daily to Haifa where they work in the building trade and in manufacturing.

The agricultural lands themselves consist of irrigated and dry farmed areas. On average, each family works 1 ha of irrigated to 2 ha of dry farmed land, although there is some doubt as to the validity of the figures which were provided by the families themselves. The factor which explains the intensity of agricultural activity in the area is the development of water resources. Irrigation permits the cultivation of summer vegetables, which require heavy inputs of labour, in contrast to unirrigated crops such as watermelon or sesame, which require only small inputs. The required labour comes from the children during the summer vacation, all of which results in the economic activity that brings about the dispersed seasonal settlement.

Marketing of the produce represents an additional economic activity. This comes about in one of three way:

(i) Merchants from Haifa and Acre purchase the produce in the cultivated area itself.
(ii) The farmers themselves bring the produce to market in their own vehicles.
(iii) The produce is sold along the roadside from booths, and to a certain extent in the village proper.

Related to this feature are the seasonal shops which open during the summer months in this area, selling food, cigarettes and agricultural chemicals. During the rest of the year, only one shop remains open, near the small Bedouin concentrations.

Factors influencing the character of the spontaneous settlement on the land

(i) Permanent physical facts

The villages of Tamra, I'billin, and Shefar'am are all located on hills on the western side of Lower Galilee. Their locations were established centuries ago for reasons of security and accessibility to water, as was the case in many other villages in Western Galilee[9].

The alluvial plain of Haifa Bay, which slopes gradually from an elevation of 30 m to sea level, is located to the west of the villages. The soils of the plain are made up of alluvial deposits; nearer the hills the chalk and pebbles rise through them, giving the

TABLE 7: POPULATION GROWTH IN DAHI, 1931-1977

Year	Population	Absolute pop. growth	Mean annual pop. growth rate (%)	Mean annual pop. growth rate of Moslem rural pop. %
1931	87	-	-	
1951	130	43	2.4	2.3
1961	175	45	3.4	4.0
1972	211	36	1.8	4.3
1977	290	79	7.4	7.0

Sources: Central Bureau of Statistics, Moslems, Christians, etc. 102
Central Bureau of Statistics, List of Localities, 1975, 30
Field Survey, 1977

TABLE 8: CO-OPERATIVE ASSOCIATIONS

Settlement	Number of Associations	Years of establishment	No. of members	Amount of water m^3	Irrigated area (ha)
Tamra	6	1954-1972	191	860,000	150
I'billin	2	1956-1968	142	430,000	72
Shefar'am	3	1968-1970	48	304,000	65

Sources: Field Survey, 1973

TABLE 9: BEDOUIN OF GALILEE IN 1948 and 1977

	1948	1977
Number of tribes	-	15
Number of permanent settlements	2	12
Total number of inhabitants	5,000	25,000
Total in permanent settlements	200	16,000
Number in non-permanent settlements	4,800	9,000
Built up area of Bedouin settlements (hectares)	1,500	3,800

Sources: Central Bureau of Statistics, Statistical Abstracts, Field Survey, 1978

soils more of a colluvial appearance. Several low, isolated hills appear at intervals throughout the plain, composed of Senonian and Neogene rocks, which were settled in the recent historical past.

The administrative areas of the three villages extend from the foothills through the plain to the area of the isolated hills. The soils here are rendzinas, in the areas on the slope. The best situation is in Tamra, which has 3,000 ha of land, about half of which is on the plain. The area of I'billin covers 1,800 ha and that of Shefar'am, 9,000 ha, most of which is in the hills.

The distance between the villages and their lands on the plain varies according to their location. The measured distance is not only horizontal, but also has a vertical element. Taking topography into consideration, Tamra is in the most favourable situation in this instance. The plain creeps eastward between the hills such that the distance between the village and the land varies between 2 and 6 km. In contrast, the variation in I'billin is between 6 and 9 km, and in Shefar'am, 3-7 km. The distance from the farmer's residence to his lands on the plain explains in large measure the "seasonal settlement" feature, the purpose of which is efficient utilisation of time and savings in transport costs.[6] In this particular case the distance factor does not explain sufficiently the differing number of structures built on the village lands.

(ii) Mobile physical factors

The water factor is the principal mobile physical factor. Water is transportable and as such increases potential. The line of contact between the hills and the plain is rich in springs and ground water. Until 1948, these sources of water were not used by the villagers for irrigation. The typical agriculture was primitive dry farming, mostly for subsistence, with only small amounts marketed. Under the influence of the Jewish society and with technological advances, wells have also been drilled on the village lands and the water is used for irrigation in the move towards the irrigated agriculture of the commercial farm.

Use of groundwater sources is not only a physical problem; it is also related to deep-rooted social changes. The capital outlay for drilling and for setting up the irrigation network is so high that the individual farmer is unable to carry out this work alone. As a result, village co-operatives were formed, leading to encouragement and aid from the Ministry of Agriculture and the Arab Affairs Department of the Histadrut (Trade Union Federation).[7] The growth of water development associations is shown in Table 8 The organisation of these associations was carried out on the basis of geographic proximity of the lands of each of the members and according to the relative area worked by each member and the

quantity of water used. The area of lands irrigated normally covered 0.5 ha - 1.5 ha. The close relationship between the number of structures and the organisation of the associations is well-marked. In Tamra, between 1967 and 1972, four of the six associations were founded and the number of new members was 125. At the same time, the number of structures on the plain in Tamra multiplied by a factor of seven.

(iii) Socio-economic factors

These factors were not examined specifically but there is no doubt as to their influence. Among the most prominent was the abolition of the military government in the mid-1960s, which allowed the movement of villagers out of the villages themselves. In addition, regional security permitted segments of the population to settle at some distance from their villages and to take up residence on the plain. The general rise in the standard of living (as well as in mobility) caused social changes and affected accessibility to the land on the plain from the hill village.

In addition, several socio-economic factors originating outside the Arab settlements should be taken into account. These include the large demand for fresh vegetables and the virtual abandonment of this sector by Jewish farmers, the decisive growth of the Jewish population in the area nearby (Haifa, Acre, Nahariya) and functional land use changes in the Jewish sector.

In summary, irrigated farming in the Arab settlements is based on vegetables cultivated on land somewhat distant from the village. Several national trunk roads and other main highways cut across these areas. In the new social and economic order that has developed in Israel since the foundation of the State, there has been a tendency amongst the villages to erect structures in the agricultural areas to serve as storage for equipment and as seasonal residencies.

An interesting question remains to be answered, and concerns the likelihood of these "seasonal settlements" being transformed into permanent villages.

The move outward and establishment of temporary settlement is a result of a growth in irrigated agriculture. It is reasonable to assume that, with improvements and progress in agriculture (such as in greenhouses) the need to be close to the fields will continue to grow, not just in the summer months but throughout the whole year. The increased use of private means of transport permits family contacts to be maintained between the villages and those living on the plain and also allows rapid access to services in the village, in particular to school. These factors accelerate the

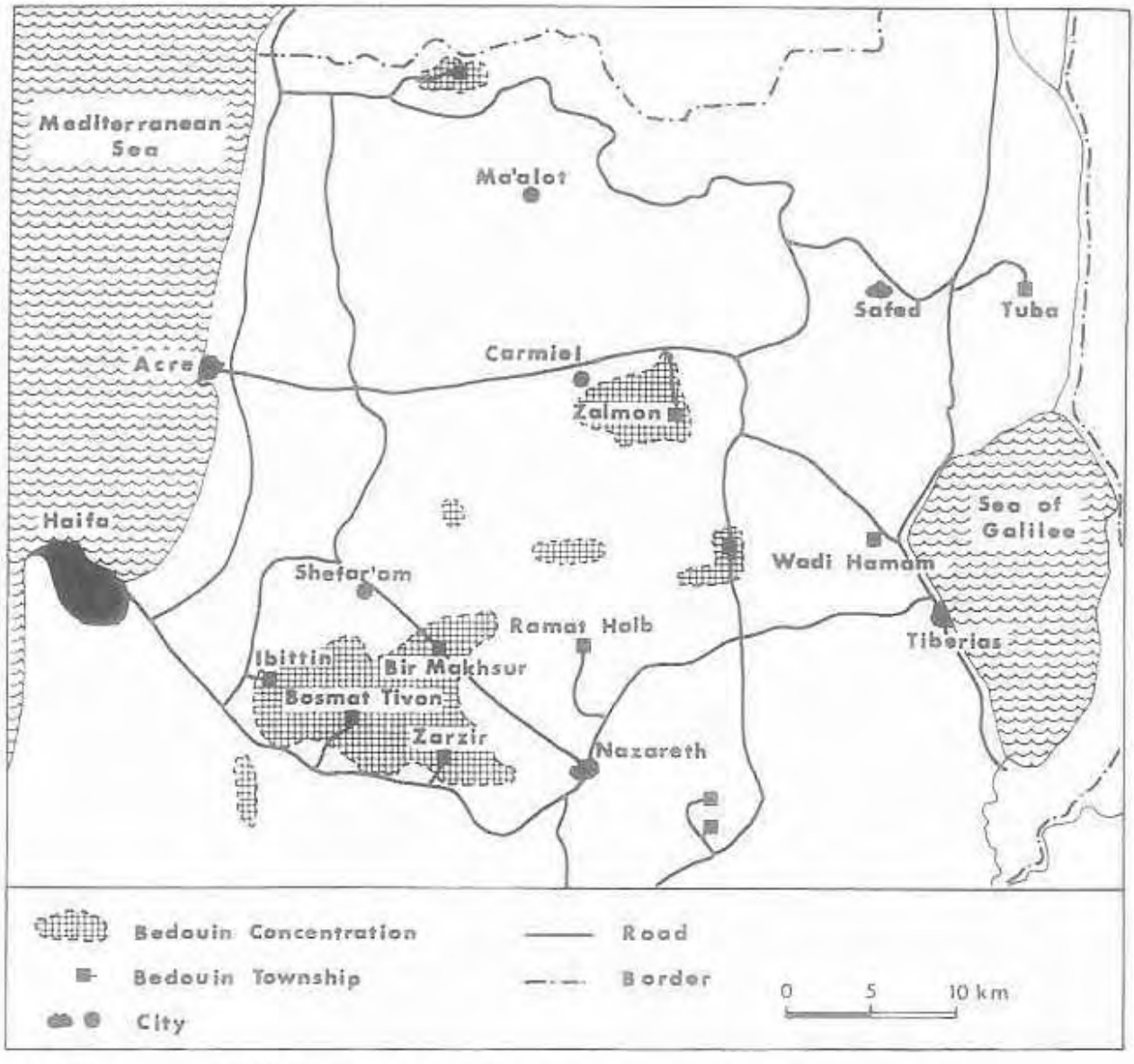

Figure 7. Small towns and Bedouin concentrations in Northern Israel

slow and continuing sprawl of the village towards the fields. This is expressed in the change of the structures from a temporary to a more permanent nature and to the evolution of roadside services such as coffee-houses, shops and booths.

In contrast to this, the law does not permit a spread from existing villages in order to establish a new settlement or new agricultural quarter. As a result, an infrastructure of roads, electricity, telephone, postal services and schools is missing, a fact that will make life more difficult for these residents.

From the experience gained from other areas in Israel in which there are large Arab populations, it can be assumed that legislation will not be able to arrest the process by which the landscape is being altered.

Bedouin settlements in northern Israel

The sedentarisation of nomads is a well-known phenomenon throughout the Middle East.[8] This process is also under way in Northern Israel, especially in the south-western part of Lower Galilee and in certain other areas such as Mount Tabor (Figure 7, Table 9).[9]

The arrival of Bedouin tribes in Northern Israel dates from before the British Mandate period. Their main concentration is in the hill areas, with twelve tribes in Lower Galilee and two in Upper Galilee. In addition, there are five tribes in less elevated areas: two in the Zevulun Plain, one in the Jezreel Valley and two in the Hula Valley. Most of these tribes originated in the Hauran and Golan and were forced to leave their areas of origin for various reasons such as blood feuds, robbery, quarrels and lack of grazing.

What makes the Bedouin of Northern Israel unique is mainly the fact that, in contrast to the Negev Bedouin, their range was restricted, as rainfall was usually high, the drought years few, and there was a relatively high population density in the area. Only in rare instances did the range exceed 3 km. The distribution of these tribes was generally around swamps or in wooded areas, such as in the Jezreel Valley or the Alonim/Shefar'am Hills respectively.

Their transformation from nomadic to sedentary life has been relatively rapid and has undergone three stages:

(i) As a result of their nomadism, they developed close contacts with settled populations, both rural and urban.

(ii) Temporary settlement in close proximity to the permanent settlements.

(iii) Transformation to permanent settlements. Initially, the tent was moved short distances or remained fixed for a long time. Later on huts appeared, to be followed by the house, usually of concrete. In tandem with the process of sedentarisation, there was a move to subsistence agriculture, growing wheat and barley and occasionally tobacco and vegetables. There is also a rapid move to outside work in the Jewish sector, in the building trade, and as drivers, clerks and even teachers.

In the 1950s and 1960s, this process continued. Owing to the high rates of natural increase and consequent population growth, there has been considerable diffusion from the original settlement in all directions. Individual households in some cases formed village nuclei such as at Hajajrah, where the head of the family had forty children and where a nucleus on one hill became a village of several hundred inhabitants.

The dimensions of Bedouin settlement have become a worrisome feature to the central authorities as this group has annexed extensive areas of State lands. In order to prevent a continuation of this process, a decision has been taken to establish Bedouin urban centres. The conception of the planners has been to establish these concentrated around a nucleus of several modern services, including a school, shopping centre and baby clinic. A road network and electricity and water systems have been prepared around the centre, and an approach road has been surfaced. The planners also intended to locate the town in the geographical centre of the area of one or more tribes and that it should include a population of not less than 1000. On the hypothesis that the population would not be agricultural, an area of 500 - 2,000 sq m was set aside for each family, depending on the region in question and the actual period in which the town was to be set up. Ownership of the land in the urban centre is in the hands of both the State and the Bedouin. Notwithstanding the approach of the planners to the new urban settlement, they have not lost sight of the fact that the population is Bedouin. Thus, high buildings are prohibited and the lots of 2,000 sq m are somewhat out of the ordinary when compared to the norm for other urban settlements.

In those instances in which the town would serve as a centre for more than a single tribe, separate neighbourhoods were planned. The towns of Bosmat Tiv'on and Bir Makhsur were the first to be established and the most successful of all. The planning of Bosmat Tiv'on was begun in 1958 and the first inhabitants settled there in 1964. In the case of Bir Makhsur, planning began in 1959 and the plan was approved in 1968. The planned size of this settlement was 5,000, covering 30 ha, and was zoned for residences (of up to two floors), open space, public buildings, commerce, civic centre, workshops and industry, small farms, lanes and roads.

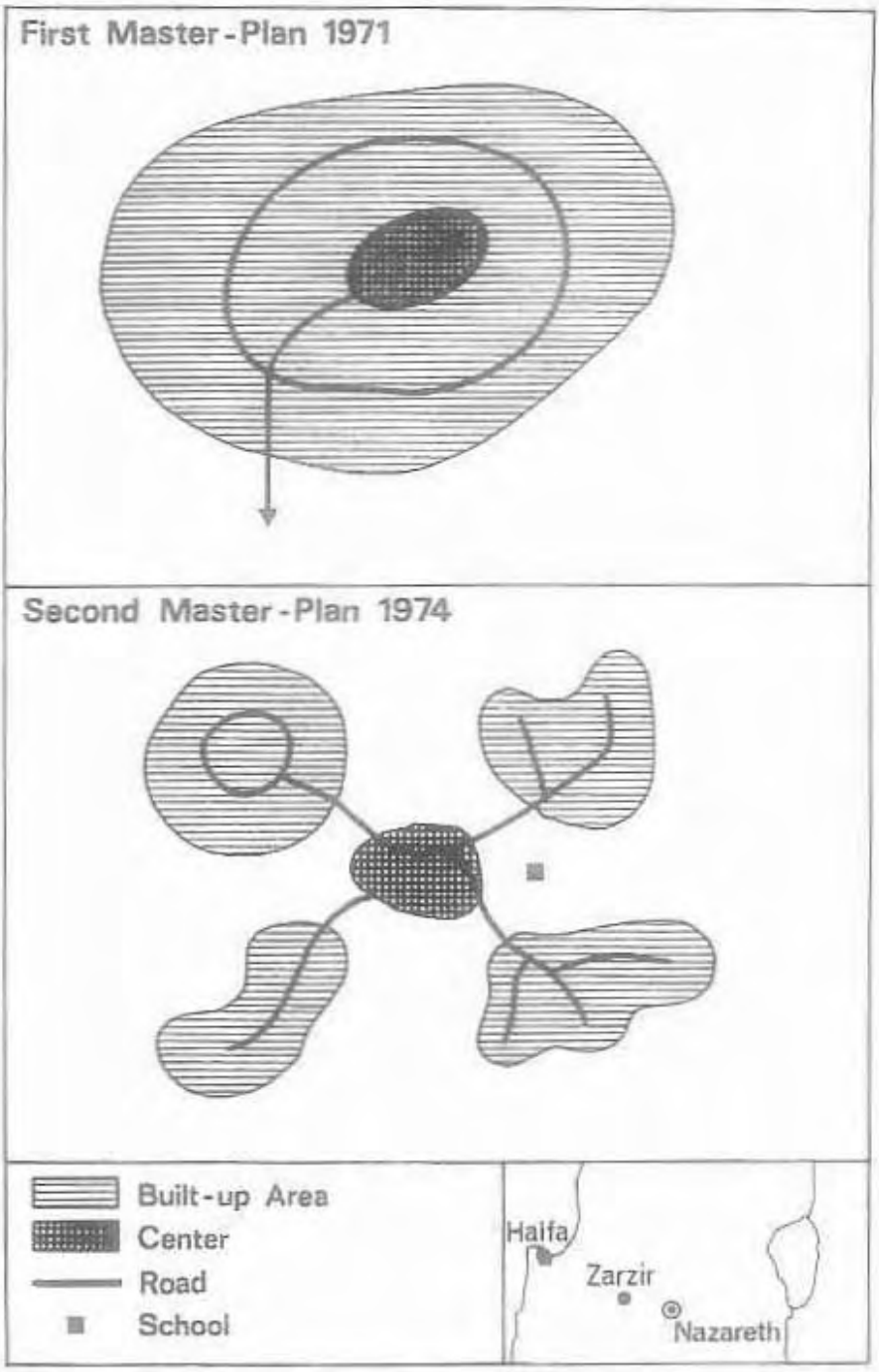

Figure 8. Outline plan for Bedouin town of Zarzir

Surrounding each house, an area of 500 sq m was added, increased to 1,500 sq m for those families wishing to practise agriculture. The success of this settlement led to the preparation of a second (outline) plan.

By 1979, twelve permanent settlements for Bedouin had been either established or designated, containing a population of 16,000. the larger towns being Bosmat Tiv'on, Beit Sarzir (Qishon), Bir Makhsur, Ramat Haib and Zalmon. Although the general idea of Bedouin towns has been successful, several problems continue to exist in the transition to permanent settlement, problems arising out of a conflict with modern planning concepts. This conflict is aptly illustrated by an example from Beit Sarzir. In 1971, a settlement for four small Bedouin tribes, numbering 2,000 people, was planned seventeen kilometres west of Nazareth. At the centre of this settlement, a large school was planned, a feature agreed upon even before the outline plan was approved At the time that the school was being constructed, the outline plan was altered as a result of Bedouin objections to living in a settlement in which the different tribes would be mixed in a single neighbourhood. Subsequently, a new plan was submitted in which segregation of the four tribes was a central idea, but in which there was to be a single service centre (Figure 8). At the same time, construction of the school was completed and, because of topographic shortcomings, the school was located closer to the neighbourhoods of two of the tribes than the others, resulting in the refusal of the more distant tribes to send their children to the school. The outcome of this affair was that the children of the two more distant tribes were bussed to Nazareth. Moreover, in order to surmount this problem, a second school is planned, to be built in the future close to the neighbourhoods of the two tribes which considered themselves as injured parties in the dispute. These schools will be distinguished along the lines of education stream, one academic and the other vocational, thus hoping to solve the problem.

This section emphasises the difficulties caused by the transition from a nomadic way of life to a settled lifestyle and by the conflicts between tribal traditions and the demands of a modern society with an urban orientation.

In Northern Israel, as in the South, sedentarisation of nomadic populations has been taking place for the past two generations. In this respect, Israel resembles other Middle Eastern countries such as Jordan, Syria, Egypt, Arabia, Turkey and Iran, in facing problems of sedentarising nomads. As in many other countries, the Israeli authorities have found it necessary to prevent this small population claiming large areas of land as a result of uncontrolled spread. As with the experience of Jordan and elsewhere in sedentarisation, the process of concentration and absorption into the modern economy often goes hand in hand with their integration into the military system. Moreover several facts have been created in the area which are difficult to

overcome. In particular, this population is dispersed over a wide area at very low densities, and it can be assumed that this will create difficulties in the future in all concentration of lands for more modern development needs.

Notes

1. Clout, 1972
2. Golani, 1967
3. Amiran, 1948
4. Jiryis, 1966
5. Amiran, 1958
6. Chisholm, 1969
7. Arnon, 1971, Ben Shahar, 1972
8. Baer, 1962; Clarke 1972
9. Kressel, 1976; Muhsan, 1965; Shmueli, 1976

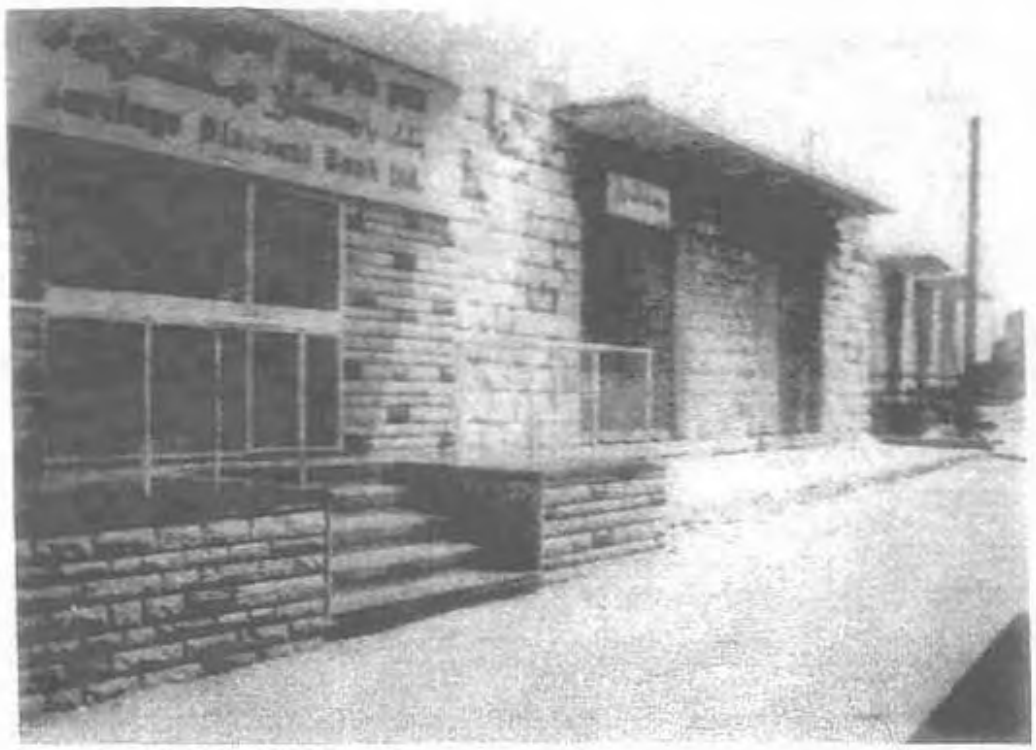

Plate 4. A part of the centre of Kafr Yasif in Lower Galilee, 1978. (photo: Arnon Soffer)

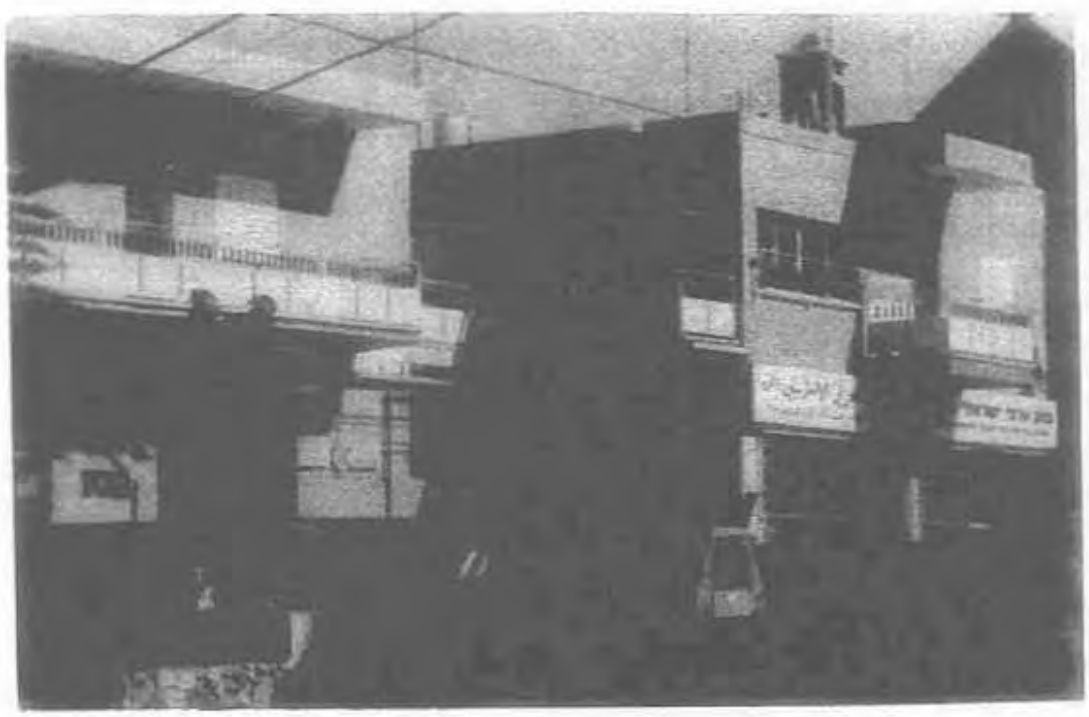

Plate 5. A part of the centre of Yafia in Lower Galilee, 1980. (photo: Botheina Zuabi)

3. DEVELOPMENT OF BUSINESS CENTRES : A FUNCTION OF URBANISATION IN ARAB VILLAGES IN NORTHERN ISRAEL

Some of the Arab villages are undergoing the process of urbanisation.[1] In the Jewish sector, urbanisation is partly a planned and controlled process involving the establishment of New Towns, whereas the process in the Arab sector is spontaneous.[2] In contrast to the process of urbanisation known in many countries, that in the Arab sector in Israel is occurring in the villages themselves and not as a result of migration to urban centres.[3]

The urbanisation of the Arab villages has already been discussed in the first chapter. This is expressed by changes in the distribution of employment, technological changes and modernisation of the villages and, in particular, functional changes in the settlement is changing from agricultural to urban, supplying its own services and in some instances becoming a central place by supplying services to additional villages. In these villages, land use is becoming more differentiated and a business centre has come into being.

In a wide-ranging survey of these villages in Israel, a research team forecast a process different from that in the development of the traditional village.[4] This research proposed two main channels of development for the Arab villages. The first represented the agricultural option, through the maintenance of a strong connection between the village and external centres. The second represented the development of the agricultural village through an improvement of internal services.

The decline in the proportion of the population employed in agriculture in these settlements changes the fundamental character of the village. Even though the village lands are still cultivated, three-quarter of the population, and sometimes more, are no longer engaged in agriculture. This change has led to an alternative proposal for the direction in which development should take place in these villages. This can be termed the urban-rural option.[5] In this proposal, the villages are classified into four levels of development:

(i) the agricultural village
(ii) dormitory villages
(iii) urbanised villages
(iv) urban settlements

The basis for this division is the level of development of services,

the employment characteristics and the insertion of clear urban functions into the villages, such as business establishments, workshops and industry.

The aim of this chapter is to characterise the development of the business establishments and services (as distinct from administrative functions) in these villages. This raises several questions:

(a) What type of business and service establishments are entering these villages?
(b) What factors explain the entry of these functions at different levels into the villages?
(c) What is the special distribution of these functions in the villages?

The sample villages and their characteristics

Eleven settlements were sampled from amongst the Arab villages of Northern Israel in order to examine the process outlined above (Figure 9). These villages were chosen as a stratified random sample. The choice was made from assumptions, based on earlier research, that the differences amongst the villages originated in three variables namely their size, the composition of their populations and their location.

The characteristics of the sample villages are indicated in Table 10. Sakhnin is the largest, with a population exceeding 10,000; medium-sized villages are represented by Yirka, Kafr Yasif, Tur'an, Beit Jann and Nahf, which have populations ranging from 3,000 - 5,000; small villages are represented by Hurfeish, Jish, Me'ilya and Sajur, each of which has between 1,000 and 3,000 inhabitants; 'Uzeir represents those villages with less than 1,000 inhabitants.

The sample villages differ not only in size but also in their ethnic and religious composition. Some of them, in which more than three-quarters of the population are of a single community (Moslem, Druze or Christian) are relatively homogeneous. On the other hand, some villages have mixed populations, in which each of the three communities is present in varying proportions. Sahknin, Tur'an, Nahf and 'Uzeir are Moslem; Yirka, Beit Jann, Hurfeish and Sajur are Druze; Jish and Me'ilya are Christian, whereas Kafr Yasif is a mixed village with a majority of Christians.

Because of the high natural growth rate in the Arab villages, the percentage of the population under fifteeen years of age is high,

TABLE 10: THE SAMPLE VILLAGES

Village	Population 1976	Religion (%) Mos.	Dru.	Chr.	Population under 15 yrs.	Occupation Blue collar	White collar	No. of automobiles per thousand
Sakhnin	10,000	92.6	0.0	7.4	56.1	84.2	15.8	45
Yirka	5,100	0.2	99.8	0.1	52.2	87.9	12.1	51
Kafr Yasif	4,700	36.6	3.4	60.0	44.8	74.5	27.5	87
Tur'an	4,600	80.1	0.0	19.4	53.2	90.4	9.6	36
Beit Jann	4,500	0.2	99.8	0.0	47.6	89.6	10.4	45
Nahf	3,600	99.9	0.0	0.1	55.3	87.5	12.5	21
Hurfeish	2,300	2.7	91.4	5.9	49.7	95.0	5.0	0
Jish	1,800	18.4	0.0	81.5	42.5	81.5	18.5	92
Me'ilya	1,800	0.0	0.0	100.0	39.7	77.7	22.3	100
Sajur	1,300	0.0	100.0	0.0	53.2	70.0	30.0	154
'Uzeir	800	100.0	0.0	0.0	58.4	100.0	0.0	77

Source: Central Bureau of Statistics, Census of Population 1972

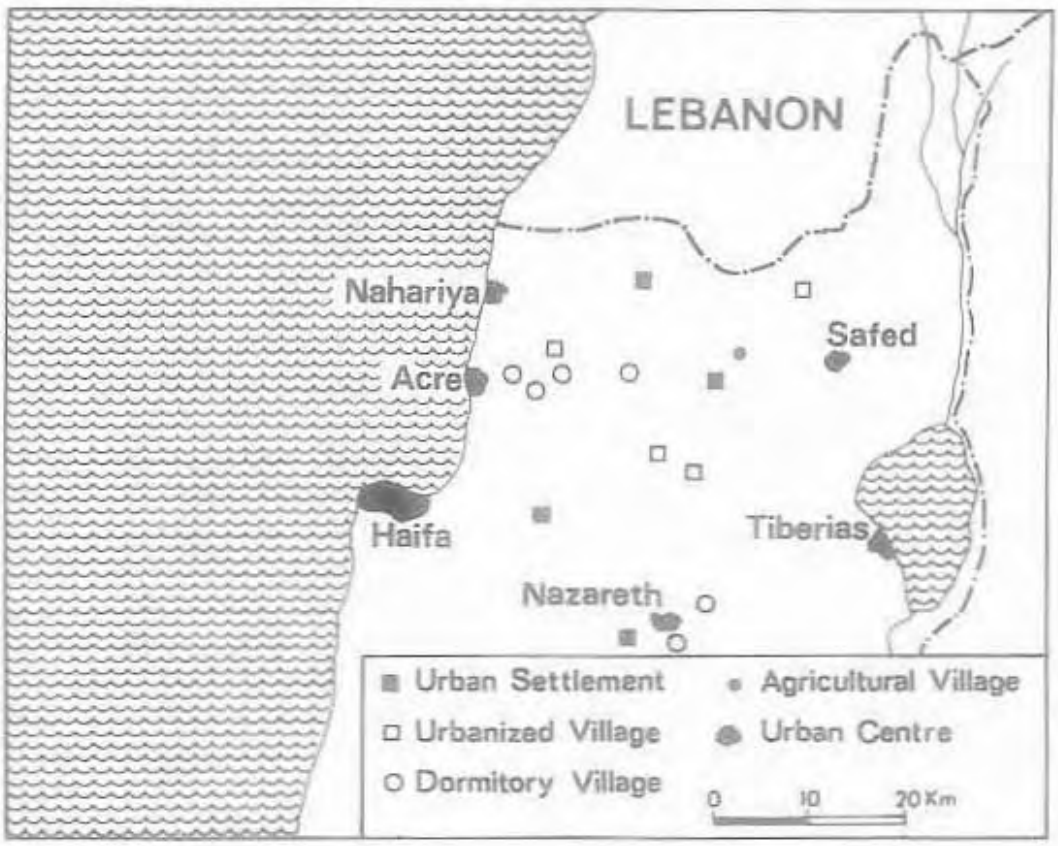

Figure 9. Spatial patterns of types of villages in the sample

exceeding fifty per cent in some cases. In general, the proportions are higher in the Moslem and Druze than in the Christian villages. This sector of the population is economically non-active but creates a demand for certain services, mainly in education and health, which are administrative functions.

The over-14 age groups represent the labour force in the villages. In order to characterize this population, two measurements were used, the breakdown of the employed population according to economic sector and occupation. The second criterion was preferred as it is an important economic indicator. The employed population was divided into "blue-collar" and "white-collar" occupations, the former including workers in agriculture, industry, services and transportation and the latter including professionals and managerial classes including technicians, managers and clerical workers.

From Table 10 an interesting connection between the ethnic and occupational composition of the village is apparent. In the Christian villages the proportion of white collar workers is higher than in the remaining villages (with the exception of Sajur in which many males are employed by the Army, which is classified by the Central Bureau of Statistics as white-collar). Finally, the level of private automobile ownership was used as a further economic indicator. In this instance also, the highest level was encountered in the Christian villages, although there were some exceptions, such as in 'Uzeir and Sajur.

The sample survey included mapping all the business establishments located in the villages and their classification into different groups. The findings of this survey were used as a dependent variable which was to be explained with the use of a set of independent variables.

Business and service establishments in the villages

The basic business establishments appearing in every village are foodstores, which have the lowest threshold of entry into the system. The grocery store, selling mostly food and other basic goods such as fruit and vegetables, household goods and stationery, is the most widely distributed store. The number of these shops is a function of the number of inhabitants. Thus, in the smallest village, there were two grocery stores and, in the largest, several dozen. The threshold of entry for these shops is difficult to fix as it is related to the size of the shops and the purchasing habits of the population. In the smallest village, the threshold appears to be between 300 and 400 inhabitants but, as population size increases, the relationship appears to be unclear. For instance, in Me'ilya the number of stores is greater than expected, whereas in Tur'an it is less. It appears as if these foodstores play little part in the

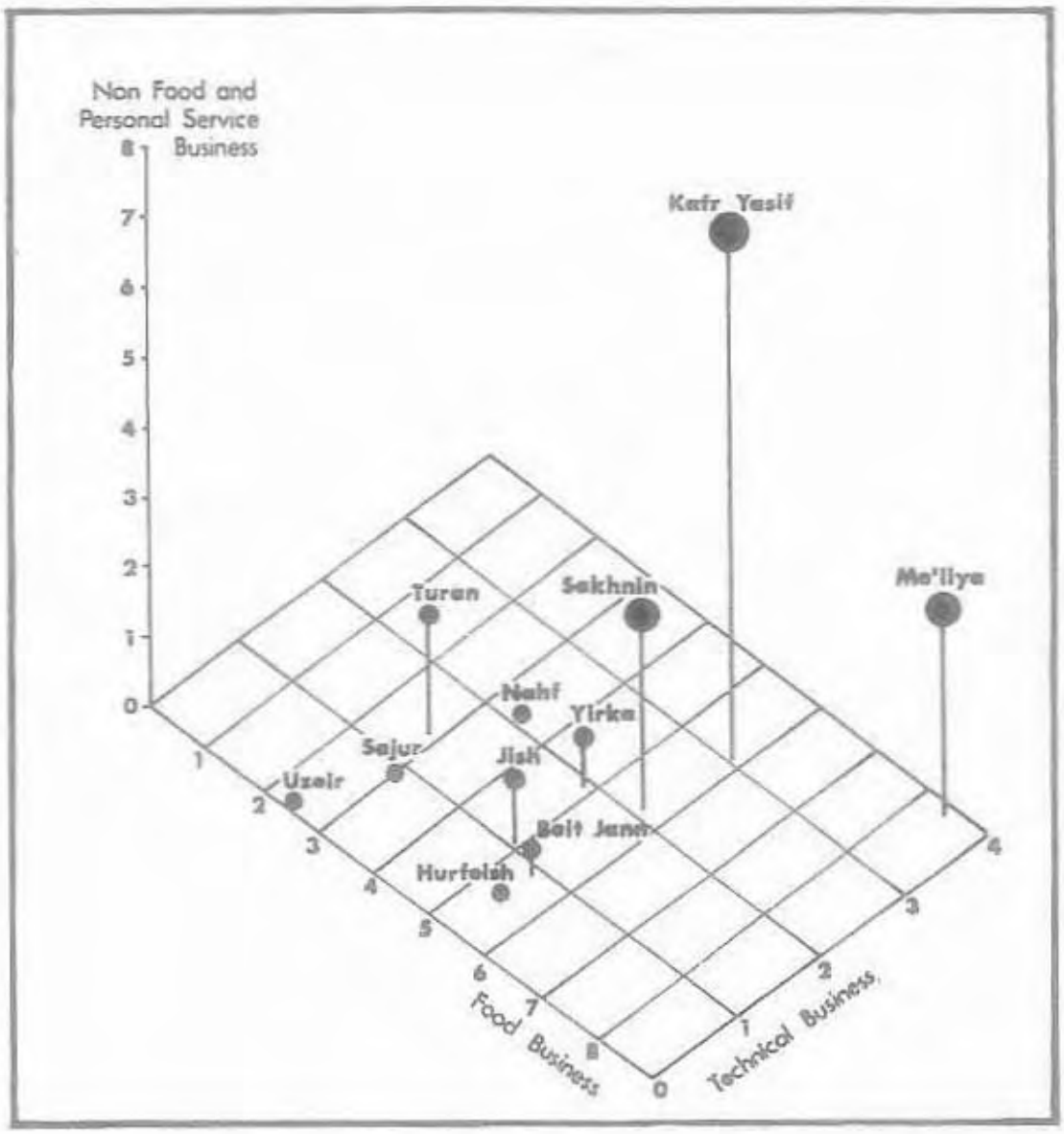

Figure 10. Classification of sample villages by types of business establishments (rates per thousand inhabitants)

process of urbanisation in the villages. This process only begins with the differentiation of types of foodstores, such as greengrocers and butchers. These speciality shops are only found in the medium-sized and large villages.

Thus, only establishments with a higher threshold than foodstores are of concern in this study. In addition to specialist foodstores, they include such establishments as electrical goods stores, stationers, toyshops, and suppliers of building materials. In addition, there is a range of personal services, including hairdressers, banks, insurance agencies and physicians. In the analysis of these business and service establishments in the village, a distinction is made between certain villages in which they are well-developed and those in which they are barely developed, if at all. Between the two extremes, foodstores and specialist shops, there is a range of technical establishments, including garages, locksmiths, and carpenters. These technical establishments are the second stage of the entry of business establishments into the village, following foodstores, but before the entry of personal services and businesses. These technical establishments are also characteristic of small villages such as Nahf, Beit Jann and Me'ilya.

The strength of the different business establishments in the settlements under study and a comparison with other settlements, was measured on the basis of number of business establishments per 1,000 inhabitants. The breakdown of business was according to foodstores, other businesses and technical businesses. The ratios between these groups are shown in Figure 10. The resulting picture points to several types of settlements.

The most prominent is the character of Kafr Yasif, in which the total number of business establishments is well-developed, especially in the non-food categories. The second group of settlements includes Sakhnin, Me'ilya and Tur'an, in which other businesses have begun to appear on the technical side, but in which the rate is between a third and a half that of Kafr Yasif. In the last two groups, the non-food businesses are in the minority.

Do Arab settlements differ significantly from Jewish settlements in Israel? In order to examine this point, the national rate for business establishments was calculated, and was studied for different categories of Jewish settlements. The national rate for foodstores is 5.5 per thousand and for non-foodstores 7.5 per thousand. In the Jewish sector, rural settlements such as Even Yehuda and Yavne'el have lower than national rates, whereas urban settlements such as Zikhron Ya'acov and Qiryat Motzkin have higher rates. In the context of national rates, most Arab villages fall near the bottom of the scale, with a small group approaching the

national average. Only Kafr Yasif has attained the national level of business development.

Factors affecting the development of business centres

What factors best explain the differences between villages in terms of the development of business establishments? Three variables were chosen to explain the variation - settlement size, population composition and the geographical location of the settlement.

Settlement size

If we assume that, in general, the number of establishments is a function of population size, it can be expected that in the sample villages there will be a strong relationship between the total number of establishments and settlement size. An examination of this relationship using rank-size correlation techniques yields a high and clear positive correlation coefficient of 0.89. But the dependent variable is not the total number of establishments but the rate of establishments. The relationship between this rate and settlement size is shown in Figure 11 for the sample villages and for a control group of Jewish settlements. The correlation between the rate of business establishments and village size is -0.55 at the 0.05 confidence level, whereas the same rate for the control group is -0.66 at the 0.05 confidence level. Even so, size explains an important part of the rate of business establishment. For instance, in Sakhnin, a large village, the business rate is higher than in Nahf, a medium-sized village or in 'Uzeir or Sajur, both small villages (Figure 11). But size does not give a satisfactory explanation for other settlements such as Kafr Yasif and Me'ilya. Size is also not the only explanatory factor in the rate for non-food establishments. The correlation coefficient between size and these establishments is -0.58 at 0.05 confidence level and this resembles the previous coefficient.

Population Composition

The religious spectrum of the Arab villages has been commented upon earlier. The relationship between population composition and the rate of establishments is demonstrated by the mean value for rate of establishments on the basis of the religious make-up of the population. Each settlement fell into one of three categories:

(a) Moslem villages with a mean rate of 8 per thousand for all establishments of which the rate for non-foodstores was 3.5.
(b) Druze villages with a mean rate of 6 per thousand, with 1.4 for non-foodstores.
(c) Christian villages with a mean rate of 13.7 per thousand, with 7.5 for non-foodstores.

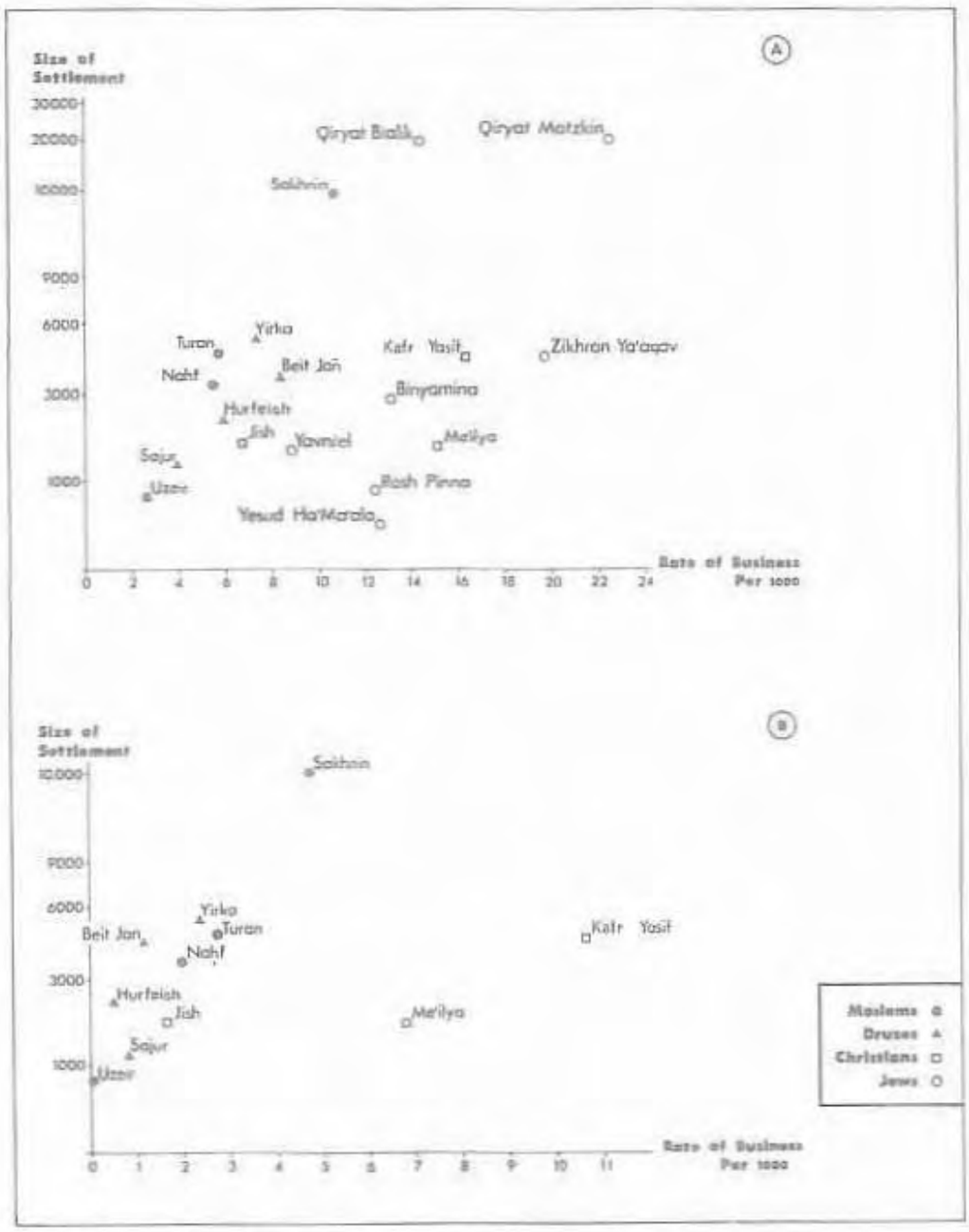

Figure 11. A. General rate of business establishments and settlement size
B. Rate on non-food establishments and settlement size

The overall picture shows that there is a distinct difference between the group of Christian villages in which the rate of establishments per thousand resembles the national average and the Moslem and Druze villages which have lower rates. The considerable development of the Christian villages is thus well-demonstrated. These are villages in which the proportion of white-collar workers is higher, and other social and economic indicators corroborate this picture. This population is on the top rung of the social and economic ladder of the Arab population of Israel; its demand for services and its economic ability to support high-threshold establishments explain the high rate of such establishments in the Christian villages.

Geographical Location

The two variables discussed above do not fully explain the phenomenon of business centres. On examination of the different villages it is clear that their geographical location is also important. This can be expressed by proximity to major national or regional highways or to other concentrations of Arab population.

Among sample villages, Hurfeish, Jish, Sakhnin and Kafr Yasif are located on regional transport arteries. As Hurfeish and Jish are not located in an area densely settled by Arabs, business centres have not developed in them to the same extent as in the others. The place of Kafr Yasif at the top of the development ladder in terms of business development in the villages studies is explained by its Christian population, its location in relationship to the main road and as one of a block of four Arab settlements with a total population of over 16,000. The transport system channels this population to Kafr Yasif. There is thus little doubt that the location of this settlement at a traffic junction has helped the development of its business centres.

The development of the built-up area of Sakhnin has brought the village close to the main road. Certain business functions, such as coffee-houses, restaurants and workshops, have encroached upon the road and enjoy the custom of the inhabitants of two neighbouring villages who pass by on the way to the Coastal Plain. Even though the number of inhabitants in these villages is larger than that surrounding the centre in Kafr Yasif, the make-up of the population is different, consisting principally of Moslems, so that the centre is less well-developed than Kafr Yasif.

The distribution of business establishments within the villages

The questions of the internal distribution of business establish-

ments, their location and their interrelationships with other elements in the village were also raised. With the spread of the built-up areas over the years, three types have been recognized (see Chapter one).

(i) the old and dense core;
(ii) the lower density neighbourhoods built around and contiguous with the village core;
(iii) the peripheral houses located in the agricultural areas, only partially connected to the rest of the built-up area.

Mapping the location of business establishments in most of the sample villages showed that, in the majority of cases, development of business centres is outside the densely built core of the village and in the zone of contact between it and the newer neighbourhoods. In some instances, the contact is along a ring-road dividing the old core and the newer built-up area. The main advantage of the zone of contact is in its accessibility to transport and to the population demanding its services. This advantage attracts a large number of establishments to the zone. Although there are establishments, mainly foodstores, in the core, their location is not characteristic of the location of business establishments in the village. Additional foodstores are found dispersed throughout the new neighbourhoods and far from the business centres, which are mainly in the contact zones.

A second factor in the location of business establishments in the village is the approach road and the central junction in the village. The built-up area spreads along the approach road and concentrations of business establishments have begun to appear around it. The approach road also has advantages of accessibility to the area close by, an additional feature which attracts establishments to it.

In some of the villages a regional routeway cuts through the village area, further enhancing village development. Around this artery, establishments are concentrated, depending on a hinterland of population which is not simply local but also contains much passing trade. The routeway serves to strengthen the centrality of certain villages.

This analysis leads to a general schematic model which explains the spatial dynamics of the development of business establishments in the Arab villages (Figure 12). This model illustrates a generalized example and includes the principal spatial elements common to most Arab villages. These include the core, the new neighbourhoods, the agricultural area, the access road and the regional highway.

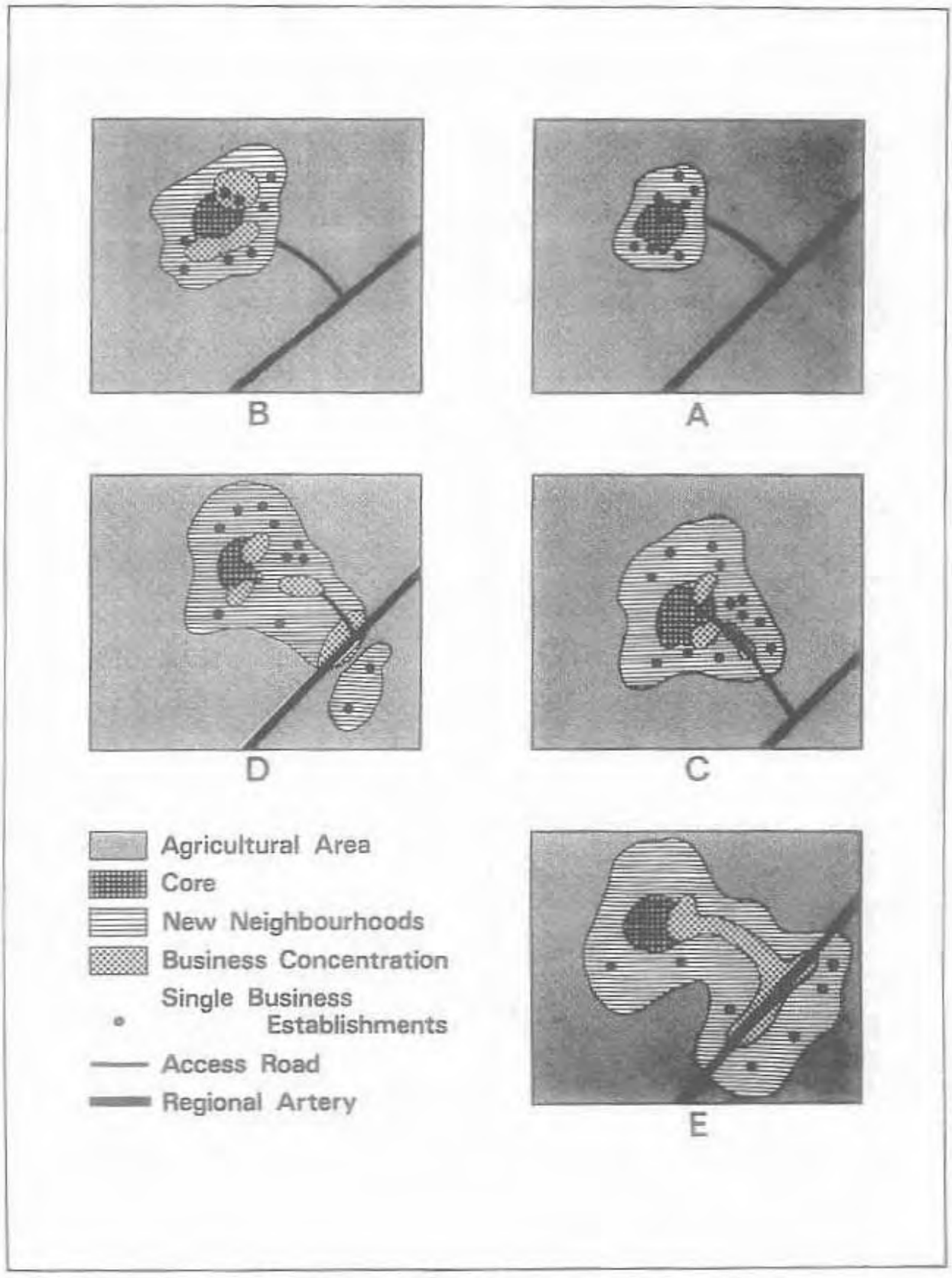

Figure 12. Schematic model of dynamics of business centre

In the initial stage (Stage I), in which the building of the new neighbourhoods has begun around the core, isolated establishments begin to appear in the transition area between these two built-up areas (as in Sajur). In Stage II, as a result of the spread of the new neighbourhoods, concentrations of business establishments begin to appear in the zone of contact. These concentrations do not yet generate a continuous area of establishments. In Stage III, the built-up area extends principally along the access road to the village; following the building, business establishments begin to appear around the access road, leading to the development of a business centre. In Stage IV, when the built-up area of the village extends far from the core and past the regional artery, the establishments begin to spread along the length of the highway, as in Sakhnin. Finally, in Stage V, when there is complete physical continuity of the built-up area around the access road and the regional routeway, the concentrations of business establishments are transformed into a continuous commercial street, as is clearly the case in Kafr Yasif.

Not every village passes through each of these stages and two sub-types are recognised. The first type of village is found near regional routeways when all the necessary conditions are met; in this case, there is a development along the lines of the model. The second type includes those villages in which the regional routeway is remote or in which the spread of the built-up area is prevented from reaching such a routeway, for instance by topographical, or administrative barriers. In this case, the spatial development will be to Stage III and the existing centres in the contact zone and at the main crossroads will be strengthened and developed.

It is clear that different factors such as population size, economic level and the location of the settlement all influence the rank of the settlement on a village-urban settlement scale, and as a result also influence the likelihood of the distribution of establishments according to the model.

Summary

In the process of change in the Arab villages of Northern Israel from traditional village to urban settlement, concentrations of business and service establishments characteristic of urban settlements begin to appear. This intrusion of establishments is not uniform in every settlement. In some, the process is well-developed and the rates are even greater than the national average, whereas in others the process is only in its earliest stages.

An important explanation of the strength of the process is to be found in the size of the village, in the make-up of its population and in geographical factors concerning the location of the village

and the character of the built-up area. Through an analysis of the sample villages, it is possible to produce a continuum for this change from rural village to settlements with a clear urban character. In these settlements, stages in the development of business centres and their spatial distribution are recognised and demonstrated through use of a simple generalised model.

Notes

1. Bar-Gal & Soffer, 1976
2. Bar-Gal & Soffer, 1977
3. Clout, 1972, Chapter 2
4. Yalan et al, 1972
5. Bar-Gal & Soffer, 1976

4. METROPOLITAN DEVELOPMENTS IN ARAB SETTLEMENTS IN NORTHERN ISRAEL

In the previous chapter, the urbanisation process was discussed. In addition to urbanisation, a relatively new phenomenon in which Nazareth serves as the centre of a conurbation, has now been recognized. In this process, the Nazareth region is rapidly becoming a metropolitan area, both on the Israeli scale and, by use of certain accepted metropolitan definitions, on an international scale, too.

Nazareth itself had grown from a small village at the end of the nineteenth century to a town of 17,000 on the eve of the War of Independence. With the establishment of the State of Israel, it became the largest Arab town in the country. Not only did very few inhabitants leave as a result of the War of Independence, but the town has served as a centre for migration from the villages in Galilee. In 1961, the population was 25,000 rising to 37,000 in 1976.

The rapid growth of Nazareth and the difference between the scale of events there and all parallel events in the region has brought about a new urban phenomenon in the Nazareth hills. The central question is thus whether the urban development around Nazareth is towards the development of a conurbation on the basis of accepted definitions of conurbation or whether it is an event peculiar to Galilee. In a simple definition, Beaujeu-Garnier and Chabot[1] state that a conurbation is a grouping of cities adjacent to one another, in which the contact between them brings about a high population density. As a contrast to this, the American definition of the Standard Metropolitan Statistical Area (SMSA) stresses a minimal size for the central city, a physical continuity between the core and periphery and a measure of economic and social integration, with the dominance of the core.[2] Shachar[3] uses a definition slightly different from the American definition and emphasizes the physical continuity of the settlements without considering the municipal boundaries, special alignment of land uses and the central nucleus of the conurbation.

The Nazareth conurbation

In order to examine the phenomenon of Nazareth as a conurbation, several features appearing in the above definition were examined.

Physical continuity

The growth of Nazareth has given rise to physical continuity between it and Yafia, some three kilometres distant (Figure 13).

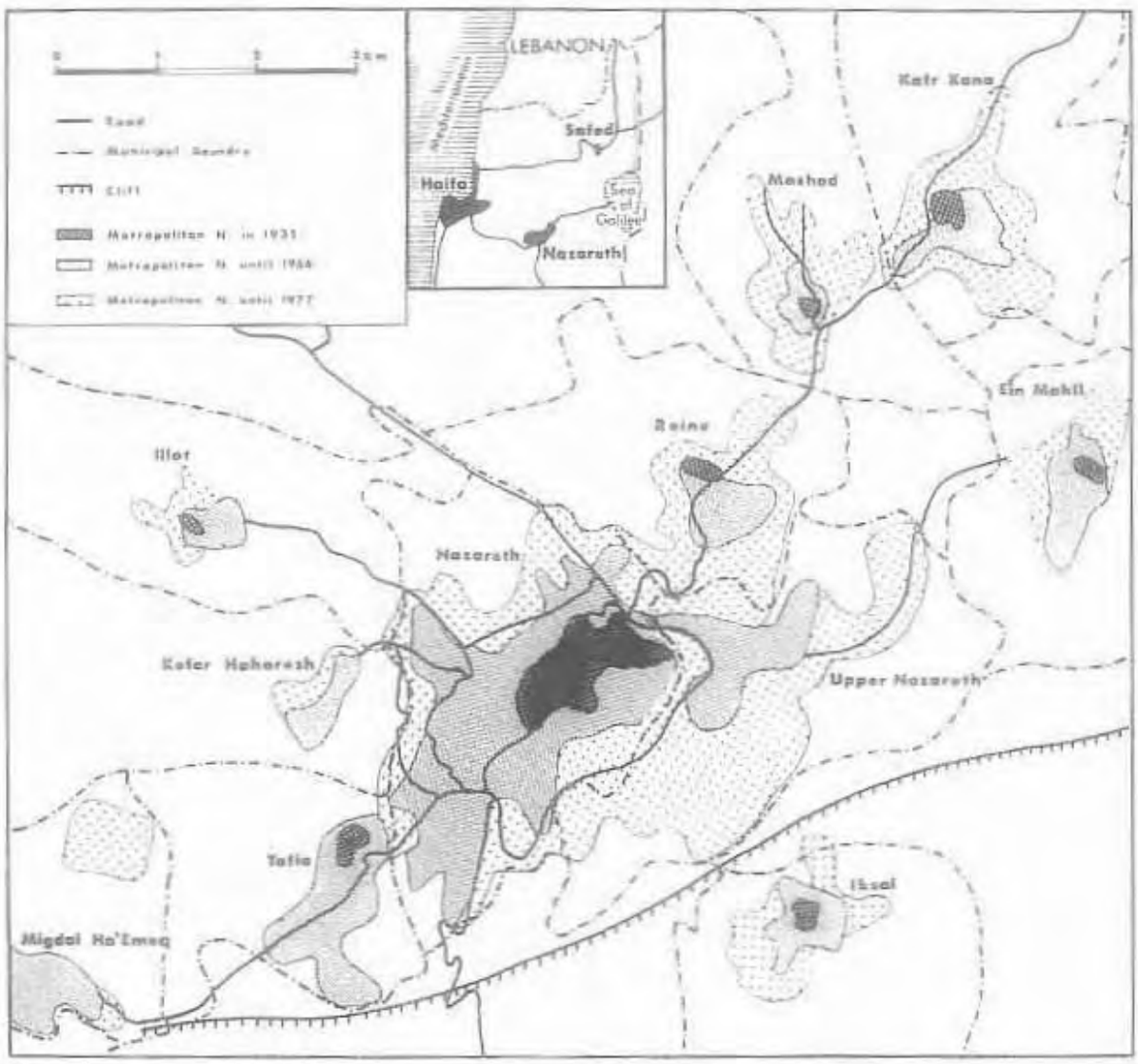

Figure 13. Geographical spread of Nazareth Conurbation

TABLE 11: POPULATION OF NAZARETH CONURBATION, SELECTED YEARS

Settlements	1961 population	1975 population	Annual % growth rate 1961-1975	1992 population
Core : Nazareth	25,000 (50.5%)	36,700 (37.9%)	3.3	70,000 (37.9%)
Inner Ring	14,551 (29.2%)	37,700 (38.9%)	11.3	76,350 (41.3%)
Upper Nazareth	4,291	18,800	25.0	44,000
Yafia	2,541	5,700	9.1	10,500
Reine	2,861	4,500	4.2	7,600
Mashad	1,308	2,500	6.5	4,250
Kafr Kana	3,550	6,200	5.5	10,000
Total Core and Inner Ring	39,551	74,400		146,350
Outer Ring	10,135 (20.3%)	22,500 (23.2%)	8.7	38,100 (20.6%)
Migdal Ha Emeq	3,978	11,800	14.4	20,000
'Eilut	1,160	2,100	6.4	3,500
'Ein Mahel	1,977	4,000	7.8	6,800
Turan	3,020	4,600	3.7	7,800
Total	49,686 (100%)	96,900 (100%)	6.7	189,960 (100%)

Sources: Central Bureau of Statistics, Statistical Yearbooks: Plan for Dispersal of Population, 1972

This continuity was first established in the early 1970s. Before this, the Israeli New Town of Upper Nazareth had been founded in 1957 as a Jewish neighbourhood near Nazareth and, to the north-east Nazareth spread towards Reine, which itself had begun to move up the slope towards Upper Nazareth. By the end of the 1970s, physical continuity almost existed between Reine and Mashad with only half a kilometre separating the built-up areas of the two settlements. In addition, the physical distance between Mashad and Kafr Kana in 1977 was only 200 m, between 'Ein Mahel and Upper Nazareth the distance is 1.2 km, and the direction of growth of both settlements assures their physical contact by the end of the decade. A similar situation exists north-west of Nazareth, where 'Illut abuts on the small industrial area of Reine along the Nazareth-Shefar'am Road.

Several settlements are present in the Outer Ring of the Nazareth Conurbation (Figure 14). Migdal Ha'Emeq is located to the west, 2 km from Yafia; Tur'an is to the north-east, 3 km from Kafr Kana. Somewhat further out is Sejera some 2 km from Tur'an. Moreover, there is physical continuity between two distinctly urban settlements, Nazareth and Upper Nazareth, and between these two towns and other settlements such as Yafia and Kafr Kana that have already become classified as urban-based on earlier findings.

The development of this continuous urban strip has been along the Haifa-Tiberias routeway but it is not simply a case of ribbon development. On the contrary, it represents an alignment with an average width of 2 km and a length of 11 km. The development of this urban area has been little affected by topographic considerations and the whole area has been infilled with the exception of the Nazareth Hills in the direction of the Jezreel Valley, which represents a barrier to construction and transportation.

Population of the Conurbation

In 1975, the population of the conurbation numbered 74,400 and, if the population of the Outer Ring is added, the figure was 96,900 (Table 11). In comparison with the figures for 1961, this represents an increase of 95 per cent. This population represented 18.5 per cent of the total population of the Northern District in 1975 and 2.8 per cent of the total population of Israel.

If the projected statistics for 1992 are realized, the number of inhabitants in this conurbation will rise to almost 185,000, an increase of more than 90 per cent over 1975. The Nazareth Conurbation will contain 23 per cent of the population of the Northern District and 3.7 per cent of that of Israel[4].

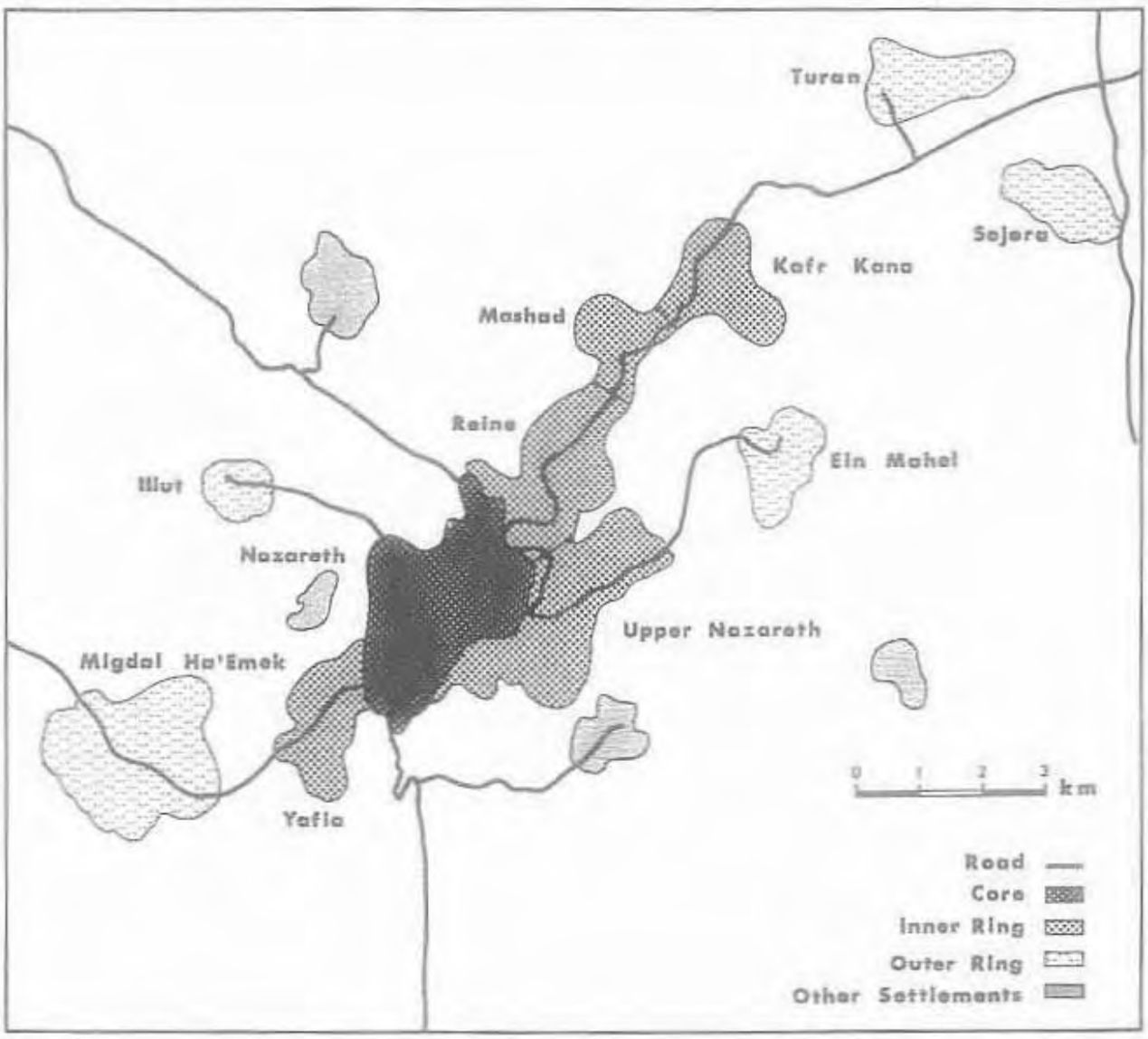

Figure 14. Nazareth Conurbation and surrounding area

Within the conurbation itself, the core contained 50.5 per cent of the total in 1961, whereas by 1975 it had dropped to 37.9 per cent (Table 11). This phenomenon is in accord with developments in other similar cases throughout the world and in Israel (e.g. Tel Aviv or Haifa). In contrast, the population in the settlements of the Inner Ring rose from 29.2 per cent in 1961 to 38.9 per cent in 1975. A similar trend was observed in the Outer Ring, rising from 20.3 per cent to 23.2 per cent.

The process in which the core empties in comparison with the Inner Ring is explained in other cities by a spread of population from the core to the settlements of the Inner Ring and as a result of the transformation of the centre from a residential area to a commercial and services zone. In the Nazareth Conurbation, however, a different process is observed. First, the spread of population from the core to the Inner Ring is extremely limited, and is seen only in the direction of Yafia and Upper Nazareth.

The annual growth of Yafia of around 9.1 per cent is also explained by migration of the inhabitants, a feature observed in the survey of the village. Parallel to the outflow of inhabitants from Nazareth, there is also a flow of population into the city, mainly from Galilee villages and of Bedouin moving to permanent settlements. Between 1971 and 1973, 837 migrants were registered as taking up residence in the city and 925 as leaving.[5]

In other settlements of the conurbation, the high growth rates are explained by the high natural rates of increase and the small net migration from other villages to the Nazareth area, by isolated instances of outmigration from Nazareth and by Bedouin sedentarisation in these settlements. Most of the growth in the Inner Ring, however, is as a result of internal migration (of Jews) and settlement of new immigrants in Upper Nazareth. Between 1961 and 1973 the net increase through migration and first settlement in Upper Nazareth was 14,530.[6]

In this way, the Nazareth Conurbation differs from other such areas. In other areas, growth of the core is almost halted whereas in Nazareth the population grew by an annual rate of 3.5 per cent between 1961 and 1975, and is projected to grow to 1992 at a rate of 5 per cent per annum.

One of the important factors in explaining the process in Nazareth is found in the condition of the real estate market in the Arab Sector. Trade in land has almost halted due to the fear of the population that there is insufficient land for the future needs of the present owners and their families. As there is almost no possibility for inhabitants of Nazareth to move to neighbouring villages and as it is assumed that the outmigration to Yafia will

be halted within a very short period, the last possibility for migration will be to Upper Nazareth, where there is a considerable potential market of apartments for rental and purchase.

Urban continuity with high population density

The contact between Nazareth and Upper Nazareth, between Upper Nazareth and Reine, and between Nazareth and Yafia is not that of rural neighbourhoods with single-storey structures surrounded with gardens, or vegetable gardens, but of urban neighbourhoods with multi-storey buildings at high density.

Inhabitants of the conurbation can choose their places of entertainment, shopping and services at will, not just from within their municipal boundaries but from within the total area of the conurbation. There are some exceptions. First there is a lack of ability to choose a place of residence freely. Even though little has been published on the matter, approximately 500 Arab families have purchased apartments in Upper Nazareth, notwithstanding attempts to stop the process.[7] Secondly, the inhabitants cannot purchase land or apartments in the Arab areas of the conurbation where purchase and sale of land is almost non-existent. Finally, not all the inhabitants of the conurbation are able to find employment within the conurbation and many commute to the Coastal Plain.

Economic Integration

In the settlements of the Nazareth Conurbation the number of agriculturally-employed is less than the average for Arab villages in Israel. This figure stood at 14.5 per cent in 1974 and for Yafia and in 'Ein Mahel the figure is 8 per cent.

With the transition from agricultural to industrial employment construction and services, the Arab settlements in the conurbation serve as a residential area in which over half the labour force are daily commuters. With the foundation of Upper Nazareth and the national effort made to develop it, a change ensued in the spatial alignment of employment in the conurbation.

Of the 12,750 persons registered as employed and living in Lower Nazareth in 1974, only 5,350 (42%) found employment in the city. Another 1,400 (11%) were employed in Upper Nazareth, with the remaining 6,000 (47%) commuting outside the conurbation.[8]

Upper Nazareth, in comparison, is more independent in terms of employment. 66.3 per cent of the labour force living in Upper Nazareth were employed there. Only 4.5 per cent were employed in Nazareth and 29.2 per cent outside the conurbation.[9] Most of the industry of the conurbation is located in Upper Nazareth and

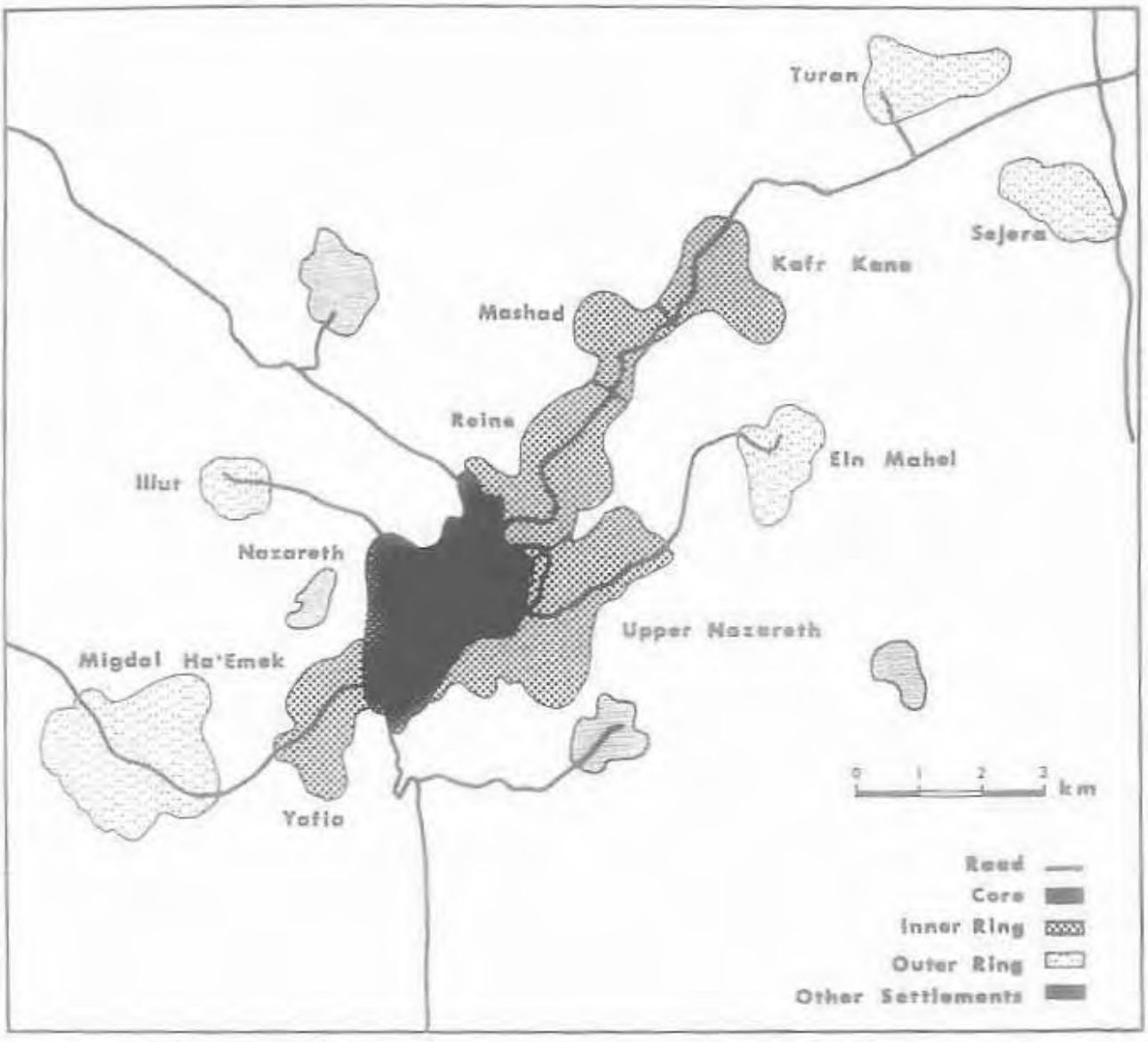

Figure 14. Nazareth Conurbation and surrounding area

most of the commuting from the core and the remainder of the settlements flow into it (Table 12). In contrast with the concentration of industry in Upper Nazareth, Lower Nazareth is supreme in the field of commerce. A survey in 1969 showed that Nazareth serves as the principal commercial centre for the Arab population in Lower Galilee.[10] In a more recent survey carried out in 1976 in two villages in the Nazareth Hills, it was shown that the conditions outlined by Soan and Kipnis had not changed in this respect.

Survey statistics for Upper Nazareth in 1972 show that a large number of its residents also used Nazareth for shopping and in comparison with earlier years, this dependence had increased. For example, in 1967, 6 per cent of clothing purchases by Upper Nazareth residents were made in Lower Nazareth, whereas by 1972 the proportion had risen to 15 per cent. For workshop services, clothing and household goods, the figures were 4 per cent and 14 per cent respectively, as most of the garages and service stations are in Nazareth.[11] These figures are also reflected in the occupational profile of Lower Nazareth in which 12.4 per cent of all the employed are in trade compared to 4.9 per cent in Upper Nazareth.[12] It is worth noting that a reverse flow of trade (from Nazareth to Upper Nazareth) occurs on Sundays.

A Central Core

Lower Nazareth serves as the centre of the conurbation and is its oldest and most heavily populated part. Moreover, Lower Nazareth has become the political centre of the Arabs of Galilee. Whereas in other conurbations in Israel the core is dominant and the vast majority of economic activities takes place in it, in the Nazareth conurbation this is not so. This is explained by several factors the most prominent of which is the religious make-up of Nazareth and its rural hinterland, which is characterised by a low level of technology and a special social and cultural system which does not encourage the development of cultural and entertainment activities or the investment of capital for the development of industry and services. A second factor is the result of national policy which has not especially aided industry in the Arab sector.

Summary

The urban development of the Nazareth Hills has been in the direction of a conurbation, according to most of the criteria outlined at the onset. There is physical continuity between all the settlements in question. In the cases of Nazareth-Upper Nazareth, Yafia- Reine and Upper Nazareth-Reine, continuity is combined with high urban density.

The population of Lower Nazareth places it seventeenth in the ranking of Israeli towns in 1974. If the towns in the Inner Ring of the Tel Aviv Metropolitan Area are ignored, then Nazareth is ranked eleventh in Israel in terms of population. The minimum size for a central city in Israel is not necessarily the same as that of the minimum size for a central city in an American SMSA (50,000). A city of 25,000 in Israel serves as a satisfactory central core for a conurbation. Moreover, the employment profile of the core and the Inner Ring points to a very low rate in agriculture, and the Nazareth conurbation has developed a special alignment of land use.

There are several phenomena which do not clearly satisfy the criteria outlines.

First, the dominance of the core is not clearly expressed. Lower Nazareth is the largest and oldest settlement in the conurbation and that in which the commercial centre of the conurbation and its rural hinterland is located. But its weakness stands out in the context of industry in particular and the employment picture in general. This fact means that Nazareth fails to meet the criteria for definition as a conurbation as suggested by Shachar[13] and by American workers[14]. However, this situation fits in with the definition and many examples of conurbations given by French geographers. Second economic integration is not complete in Nazareth on the basis of the American definition, but is not disqualified by the French definition (Agglomeration). It exists with regard to some of the activities in the conurbation and as such, again, does not qualify on the basis of Shachar's definition.

In summary, there is some doubt as to whether a conurbation exists in Nazareth, whether on the basis of definitions offered by Shachar or by the U.S. Bureau of the Census. On the contrary, on the basis of definitions by French workers, the phenomenon appears to exist. However, an anomalous phenomenon on the basis of all these definitions is the lack of any independent employment status in the Nazareth conurbation. This latter feature is characteristic of the whole Arab sector in Northern Israel and will continue to exist in the foreseeable future. However, as the remaining components are otherwise suitable to the definition of a conurbation, we thus have a special model of a conurbation suited to Northern Israel.

From a cursory examination of the development of Arab settlements in Northern Israel, it is apparent that this model is also suitable to other conurbations that can be expected to come into being in the region. If the high rates of natural growth in the Arab sector should continue without migration to the cities in the Coastal Plain and without vertical building in the villages, it can be expected that a conurbation similar to that around Nazareth will

develop with Kafr Yasif as a core, and with Julis, Abu Suan, Yirka, Makr and Jedeide. In the Sakhnin valley, the three settlements of Sakhnin-Deir Hanna-Araba form another potential such area. A fourth potential conurbation appears in the Beit Kerem Valley from Majd-el-Krum in the west to Ramah in the east and includes Carmiel, Nahf, Sajur, Bueine and Deir-el-Assad. Finally, another complex settlement is possible along the route from Bir Makhsur, I'billin, Tamra and Kabul (Figure 15).

In all these cases, physical continuity is developing and in each grouping there is a central settlement though this is not yet always dominant. On the contrary, each grouping is dependent upon a more distant economic centre.

Notes

1. Beaujeu-Garnier & Chabot, 1967,224
2. Berry & Horton, 1970, 252-53
3. Shachar, 1974, 4-5
4. Geographical distribution, 1972
5. Berman, 1976, 70
6. Ministry of the Interior, 1974
7. Field Survey, 1977
8. Nazareth Labour Exchange, 1974
9. Arbuz, 1972, 22
10. Soen & Kipnis, 1972, 56
11. Arbuz, 1972, 56
12. Census of Population, 1972
13. Shachar, 1974
14. Berry & Horton, 1970

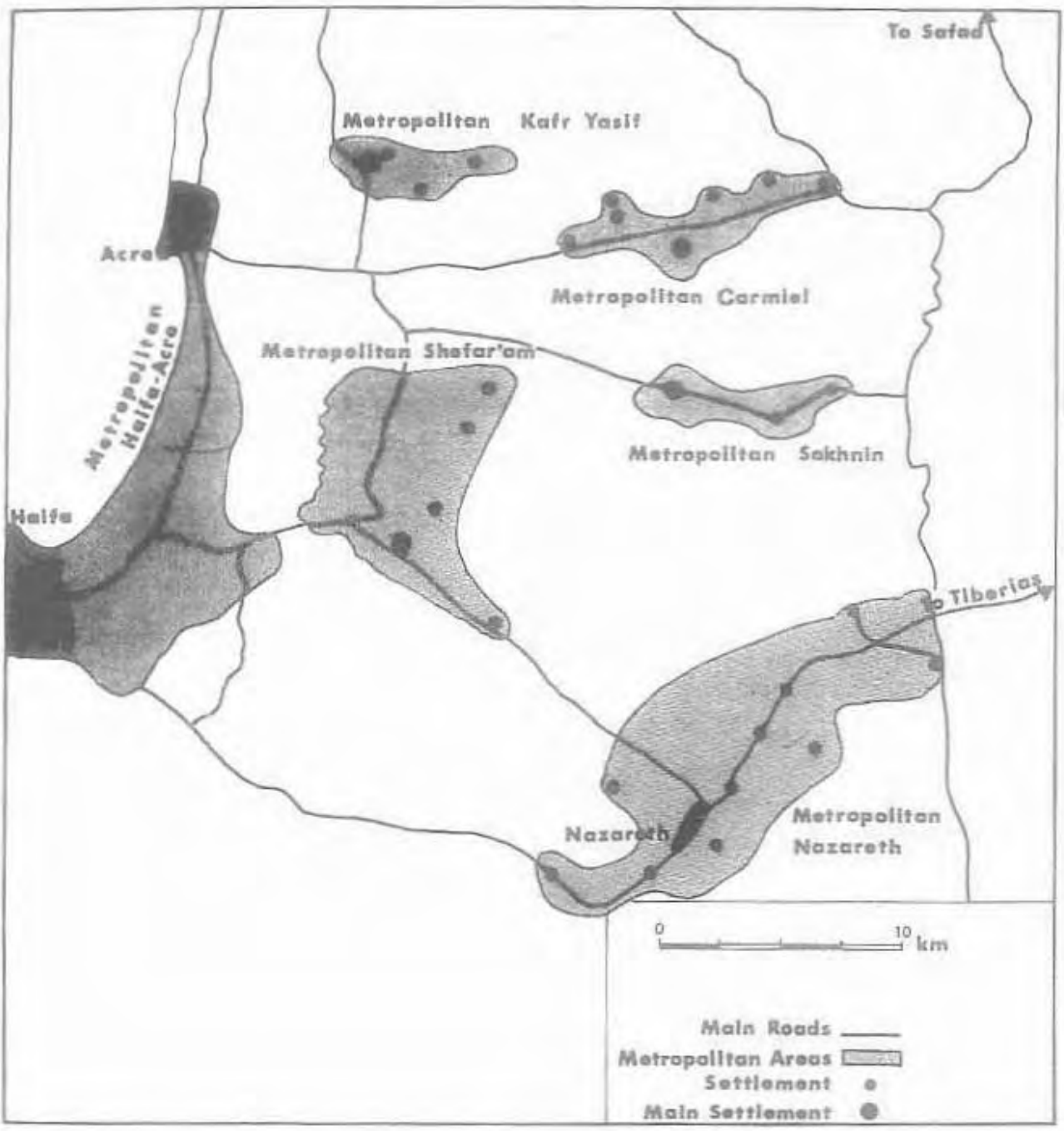

Figure 15. Conurbations in Lower Galilee in the 1980's

5. PHYSICAL PLANNING IN THE ARAB VILLAGES IN CONTRAST TO SPONTANEOUS CHANGES

Some of the changes outlined in the preceding chapter are relevant to the work of physical planners, as the process or urbanisation is accompanied by differentiation of land uses, the spread of the built-up area, a noticeable growth in building density and pressures and improvisations in the regularisation of the road network within the village. Whilst changes have been taking place within the village, the resulting changes demanded in the Israeli planning system have not been forthcoming and there is little experience in making planning principles suit a changing reality. It seems as if even the leaders and inhabitants of the villages themselves are not aware of the revolution taking place. Certain tensions have thus developed within the village, and between it an outside factors in areas concerning private construction (sites, size, style and height), the road network, and the siting of public institutions and commercial centres.

The sensitivity of the villagers to any infringement on land (even land not currently utilised) is expressed in the growth of opposition to the various Outline Plans, in the attempts to delay their approval, in an increase in instances of infringement of the law , mainly in aspects connected with building and in the political struggles in the village itself.

The purpose of this chapter is to analyse the way in which the Outline Plans are prepared, to examine the physical spread of the village, the siting of the commercial centres and industrial areas and the development of the road network. Finally an attempt will be made to arrive at a general model for a new Outline Plan which answers these various needs.

The development of land use functions in the Arab village (general model)

Two situations representing different stages in the development of the Arab village are shown in Figure 16. The first stage represents a village of approximately 2,000-5,000 inhabitants, in which the commercial centre has developed between the old core and the main road approaching it. The houses built outside the core follow the stellar pattern of the roads from which several cul-de-sacs branch off. At some distance from the built-up area, an industrial structure, filling-station or some other economic establishment, which has caused considerable ecological damage (such as pig-rearing, burning of coal, etc.) has been set

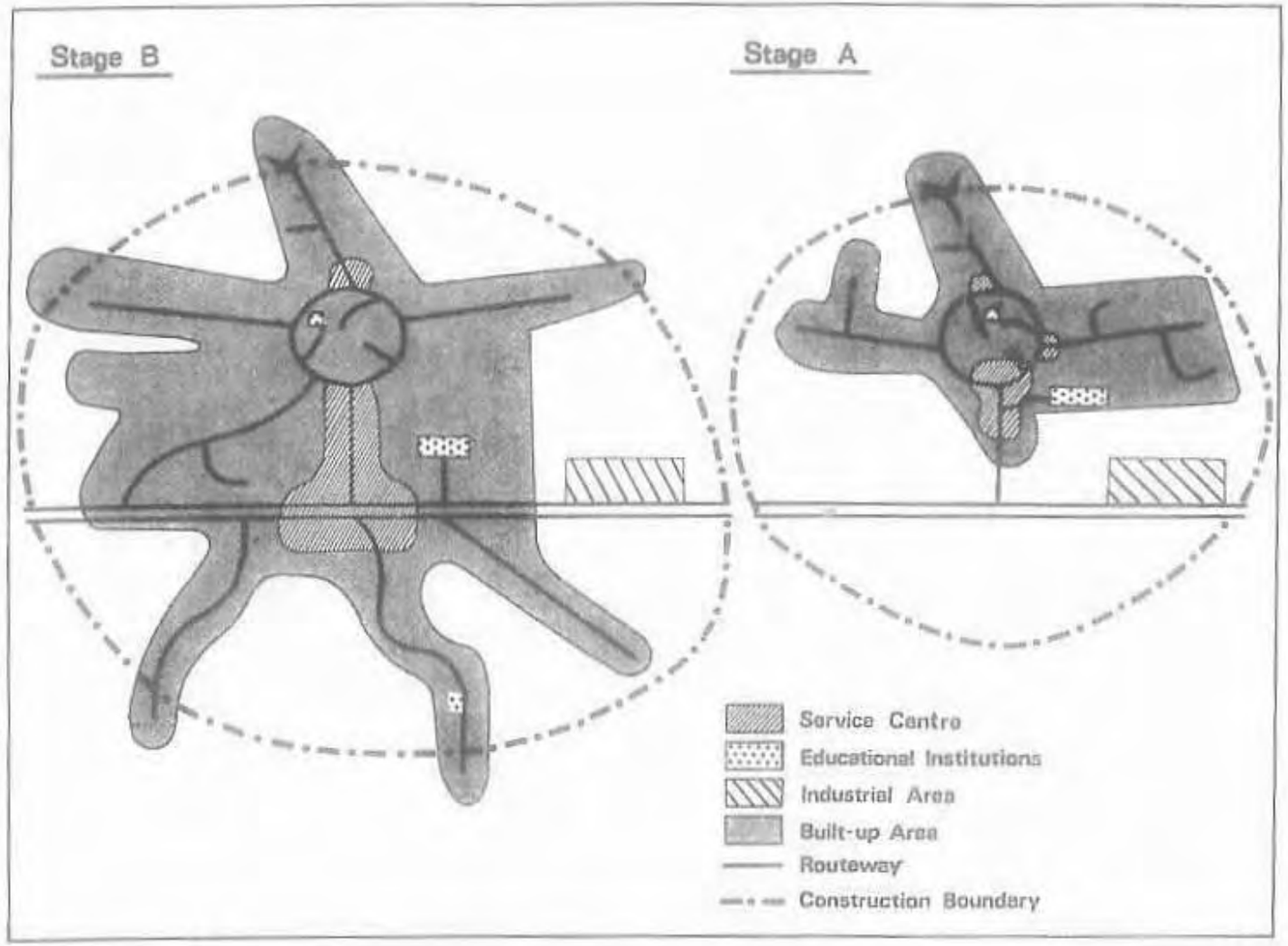

Figure 16. Land use in an Arab village

up. The elementary school is normally located in the new built-up area outside the core, and in some rare instances, some classes are held in private houses.

In the second stage, the village has grown and numbers 5,000-15,000. The main change in comparison with the first stage are the movement of the commercial centre to the main road and the spread of the built-up area of the village in every direction with the stellar pattern remaining and a large number of cul-de-sacs leading to the more distant houses between each pair of roads. Here and there some buildings have already strayed beyond the main built-up area and secondary commercial centres have come into being at various sites in the village.

The present Outline Plan (general model)

From an examination of a large number of Outline Plans submitted to the Northern District Planning Committee (including those plans which have been approved, are currently under consideration, or have been rejected), a general model has been constructed. This model presents the pattern for the Outline Plans of the Arab village in which the principal elements are as follows:

(a) The boundary of the built-up area, which is, in most instances, circular.

(b) A relatively large industrial area on the periphery of the village, sometimes accompanied by a second area also on the periphery. There is little consideration in the planning of these industrial areas for the predominant wind direction. In Yirka, the planned area is to the west of the village; in Me'ilya, in the centre: in Tur'an, to the east; in Kafr Yasif to the south, and in Sakhnin, to the east and west.

(c) The core of the village is always located in the centre of the plan with an unregulated road network and generally with a recommendation that it be preserved on archaeological, historical and architectural grounds.

(d) The commercial centre of the village is located alongside the main road, bisecting the village or alongside the road leading into the village.

(e) Educational institutions are scattered throughout the village.

(f) There is no distinction between residential neighbourhoods. On occasions there is a basic differentiation between two types of neighbourhoods, but the differences are not meaningful.

(g) The road pattern is mostly stellar; all the roads radiate outwards from the centre to the periphery with a few connections between them. There are variations in the model for topographic or other reasons.

The gap between the development model of the Arab village and the model of the Outline Plans raises many problems needing examination. These may be categorised as follows:

(i) Survey of the present situation and directions for planning the Arab village[1].

The first stage in the preparations of the Outline Plan is the carrying out of a survey of the existing situation in the settlement in question. This survey presents a picture of the physical, social and economic situation in the village. At the same time, previous plans for the village are examined.

Surveys of the Arab villages in the Northern District were carried out mostly between 1964 and 1968 and only in exceptional cases were new surveys carried out at a later date. The discussions on the approval of the Outline Plans of these villages in most cases continued through the 1970s. In 1976, seven plans were in force and another three submitted from a total of sixty Arab villages in the Northern District.[2] This was not simply a delay of ten years but covered ten decisive years in the development of the Arab village in Israel. In this decade, there was considerable development, a result of the abolition of the military government and of the economic boom in Israel following the Six-Day War. This development, which has already been discussed, was most dramatic in the Arab villages.

The third stage in preparation of an Outline Plan is the discussion on planning principles. These principles are based on the second stage in which conclusions from the survey are reached on planning directions, the origins of which are contained in government policy, and on economic principles of planning.[3] The directions to planners given in the past and still in operation today (Ministry of the Interior Programmes) testify to the absence of correct evaluation of the situation of the village at present and of the character of its growth. They also testify to the lack of a clear perception of the type of settlement which the authorities would like to see and develop towards the end of the planning period.

The planner, for his part, is working according to outmoded models and has not been aware of new directions in development. As an example, in most of the villages there is a directive to preserve the village core on account of its historic importance and special architectural and aesthetic values (Figure 17). This directive does not hold on

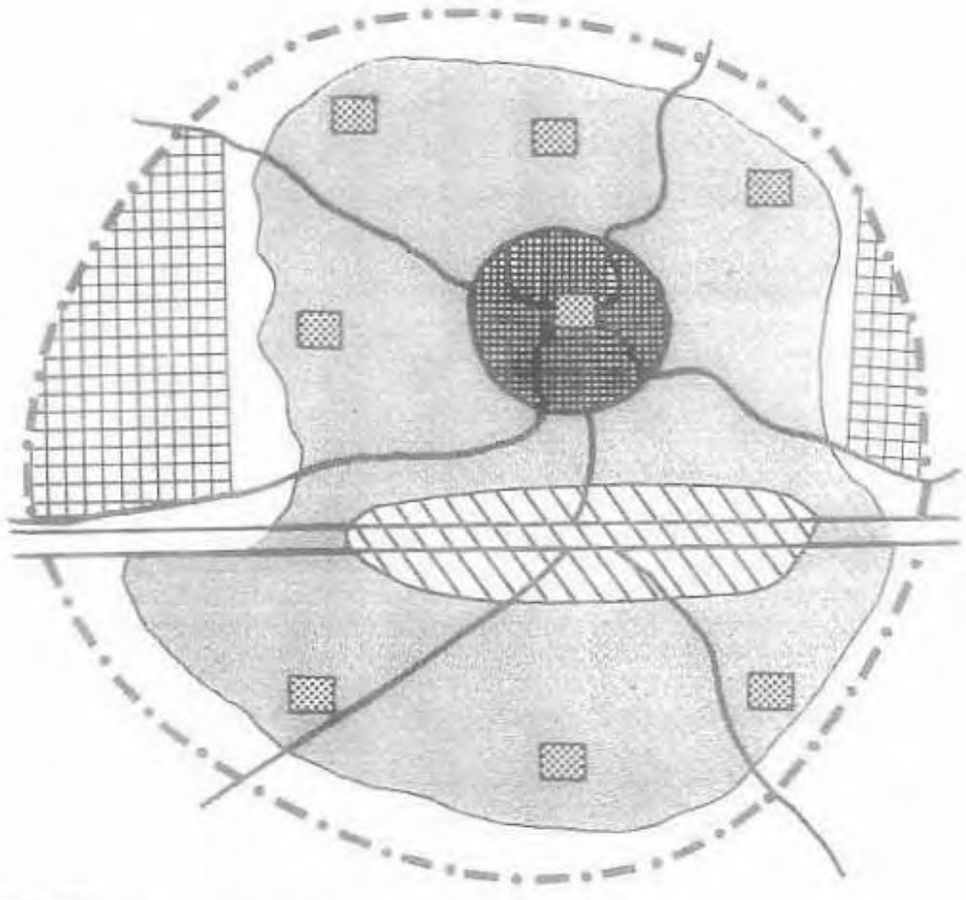

Figure 17. Model of outline plan of an Arab village

an examination of the actual situation, as the village core is changing and is rapidly renovated as a result of rising pressure to find a solution to housing problems. It appears that, with the rapid pace at which changes occur compared with the slow rate at which administrative procedures leading to approval of the plan take place, little will be left to preserve in the old centres. The result is that the plans presently being discussed in the various planning committees are not relevant to the situation in the field.

(ii) The physical spread of the village and the need to build vertically.

The high natural growth rates, the rise in living standards and the feeling of security among the inhabitants of the Arab villages have all led to building on a scale without precedent. At the beginning, there was an exodus from the core of the village to the margins. Today, the trend is to spread in all directions, often beyond the building units permitted by law. Two additional factors have contributed to this spread. One is the desire to build in a rural style (one or two storeys only), a feature which was widespread until recently; the second, the spread of the village not just by contiguous growth but by leapfrogging because of problems connected with land ownership, relationships within the extended family and inter-family relationships.

The result is that building is taking place far from the centre, with many parcels of land left empty within the village as a consequence. The villages stretch out over intensive areas in which the distances between the buildings at the opposite extremities are between 1 and 2.5 km (depending on the size of the village). This can be contrasted with the Jewish town of Carmiel in which the maximum distance between any two houses is 1.5 km in a settlement with 7,000 inhabitants. A high correlation (-0.96) exists between the population of a village and the extent of its physical spread, expressed as the maximum distance between any two houses.

There is also a need to plan secondary commercial and service centres in addition to the main centre,[4] similar to those planned for urban neighbourhoods, or for new towns. The designation of space for these secondary centres demands that parallel solutions be found to transport and parking problems. In plans submitted or discussed till now, there has been no consideration of this phenomenon.

It is also desirable to permit upward building in the villages. At present, the plans normally distinguish between two residential zones in both of which building is permitted only to a height of two and a half storeys. This approach attempts to preserve the rural and agricultural

character of the settlement at a time in which the development trends are towards a more urban character. If taller buildings were permitted there would be a lessening of pressure on land at the margins and outside the village, and a consequent increase in the compactness of the village structure. This fact is very important from a planning viewpoint. Of course, upward building demands changes in the road network of the village and a new division of the neighbourhoods. It can be expected that a change such as this would bring rental neighbourhoods to the village, a phenomenon that does not presently exist.

(iii) The siting of the commercial centres.

A model of the distribution of retail establishments and voluntary services has already been presented (Chapter 3) in which several stages in the location process of the commercial centre have been recognised.

What distinguishes the Arab village from the general model of urban centres is that in most of the cities the centre occupies the oldest sections of the city and at a later stage moves in a particular direction according to a number of principles or guidelines.[5] In the Arab village the centre does not develop in the old core, which in most cases possesses difficult topography, but along the margin between the core and the newly built-up area. It can be assumed, in line with the situation in other towns, that the old commercial centre will vanish and lose its importance to the part which has advanced towards the main road. Several questions are raised, notably:

(a) Did the planner visualise the development of a centre in the Arab village and did they allot it sufficient space?

(b) Was the centre sited in the most appropriate location?

(c) The development of the centre with an appropriate level of services and its size are dependent, among other things, on the location of the village, its population and that of its hinterland from which it can be seen that not all centres in the Arab village will reach the same level of development. Do these factors enter into the considerations of the expected size of the centre?

In order to answer these questions, a number of Outline Plans submitted to the Northern District Planning Committee between 1972 and 1975 were compared with actual land uses in 1976. In Kafr Yasif, the commercial centre had outgrown the boundaries allotted to it in the plan which dated from the 1960s (Figure 18). In two instances (Sakhnin and Reine) centres were proposed close and parallel to the main road passing through the village at a time when the actual centres had developed in the contact zone between the village core

and the new built-up area (Figure 18).

The planners had failed to recognise the current location of the centre and di not take into account that the margins of the centre (its historically interesting part) would continue to be an active part of it in the future, and that the "migration" of the centre down to the main road would take a considerable time. Therefore it is necessary to tie the plan into the current state of events and to the trend of development in the near future, along the lines of the model outlined above. This is on the assumption that the planner can find the happy medium between custom and rules of technological development.[6]

In the Outline Plans examined, there is no designation of areas for secondary commercial centres. Such centres have already begun to develop in some of the larger villages as a result of the distance between the new neighbourhoods from the village centre and of topographic difficulties. If the trend toward the spread of the village over a considerable area should continue, the need for secondary centres to be located at secondary junctions in the village will be strengthened.

(iv) Determining the location of the industrial areas.

In some of the Outline Plans, extensive areas have been designated as industrial areas on the assumption that, with the development of the village, industries with a demand for a cheap labour force or female labour will be drawn to it. On the average, the area set aside for industry in each village is approximately three per cent of the total area, excluding the two exceptional cases of Kafr Yasif and Yirka.

It might have been assumed that, with the development of the village through local capital and external aid, industry would also reach the Arab sector. This expectation has not been realised until now and, meanwhile, government policy has been to support new industry through the development of supra-municipal industrial areas.[7] Such areas have been established in many parts of Northern Israel and are designed to absorb industry and manpower which would otherwise be directed to the cities and existing villages. These areas are located a relatively short distance from all the Arab villages in the North and it can be assumed that most industrial development in the foreseeable future will be concentrated there.

Small plants with a low threshold will continue to be established in the villages themselves mostly by means of private investment by the villages. The sites presumably will be close to the commercial centres, as is normal for small industries. A small proportion, especially those which are environmentally

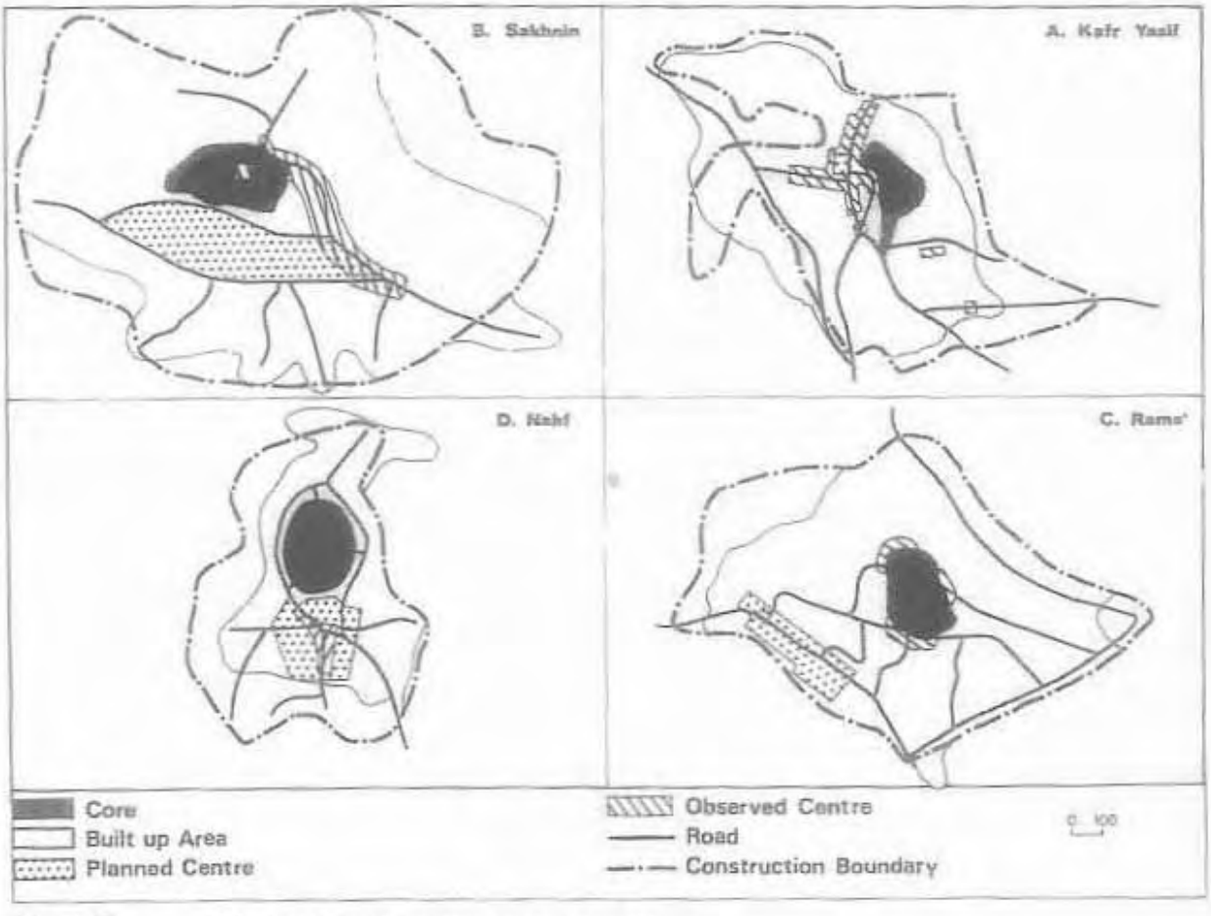

Figure 18. Actual and planned centres in the Arab villages

TABLE 13: INDUSTRIALLY-DESIGNATED AREAS IN ARAB VILLAGES

Village	Industrial Area (Hectares)	% of total village area	Number of establishments (1975)	No. of establishments per 1000 inhabitants
Tur'an	4.5	-	5	1.25
Ramah	4.16	4.3	11	2.75
Jish	1.4	2.9	3	1.5
Sakhnin	22.0	-	21	2.1
Nahf	1.85	2.4	2	0.5
Kafr Yasif	12.2	7.5	12	2.6
Me'ilya	2.3	-	7	3.8
Yirka (Qiryat Shemona)	69.0 (25.3)	40.0 (4.0)	10 (87)	1.9 (5.8)

Sources: Outline Plans, Field Survey, Statistics provided by the Central Bureau of Statistics

the demolition of houses which front on the narrow alleyways. The planners come under pressure from private citizens, including representatives of the hamulas (clans), heads of the local council and other pressure groups within the village, each demanding that the proposed routeways be altered so that the acquisition of their land will be minimised and will be carried out at the expense of others. The result is that the Outline Plan does not provide an answer to the future needs of the village or town. In fact, as it appears on the maps, the Outline Plan often becomes fictitious because of the erosion of the situation that has taken place in the field.

In order to illustrate the situation, an example is shown from a particular Arab village. In Figure 19, the following are illustrated:

1. Three road sections incomplete because of opposition by the landowners.

2. Planned roads, the surfacing of which has been held up because of opposition by the landowners.

3. A road surface on a very steep slope in place of one of the roads was delayed.

4. Three sections, the surfacing of which was held up during the period of office of one local Council chairman and permitted during the office of another.

5. A road which was surfaced outside the built-up area and designated to serve an isolated building belonging to a relative of the Local Council Chairman.

In order to make the plan effective, recourse must be made to legal means to free the planner from various pressures in the village and to allow him to plan according to planning principles without being disturbed by the Local Council Chairman or private citizens. He must also learn the development that has taken place in the village and see what is the most suitable route network for the Arab village.

(vi) The location of educational institutions and playgrounds

In the siting of educational institutions, the planner attempts to pursue the principle by which the institution should be sited as close as possible to the mean geographic centre of the pupils' homes. Kindergartens should be the closest to the

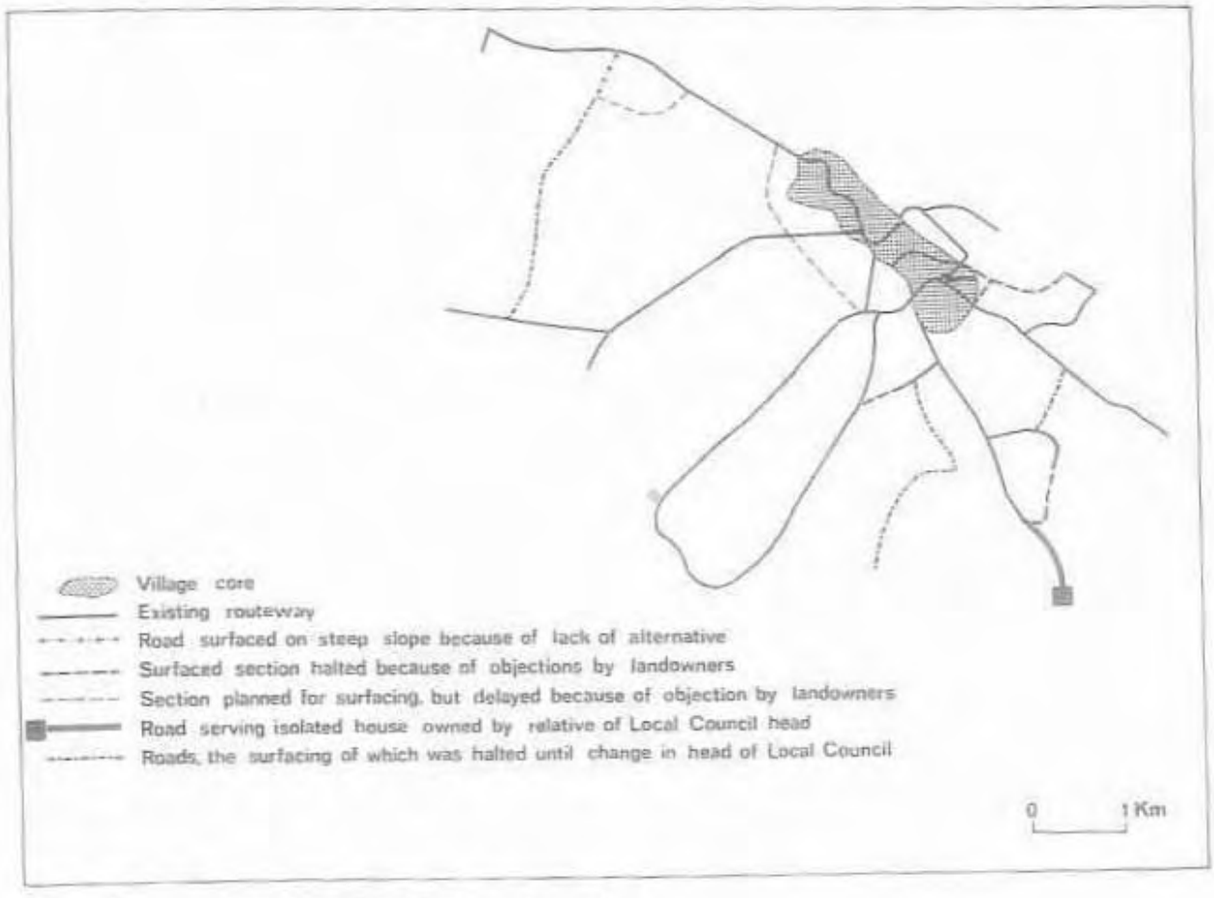

Figure 19. Routeways and politics in an Arab village

homes, elementary schools somewhat further, with secondary schools generally quite distant, sometimes, for want of an alternative, even in a neighbouring village.

Even though, in the Outline Plan, this has been understood, the situation is different in practice. Schools are normally built on public land but, as in most villages all public land is already in use, there is difficulty in acquiring land for the construction of schools and other public institutions. This is made all the more difficult by the fact that purchase and sale of land has been almost non-existent in Arab villages in recent years because of the "alarm" sounded by lack of land for building and the fear of the residents that there will be insufficient land for all members of the family. The institution that determines and will continue to determine the location of public institutions, especially educational institutions is the Israel Lands Authority, which is the only body capable of providing land for these purposes. The lands of the Authority are usually located along the periphery of the villages or outside them. Even though this situation does not fit in with planning principles, it appears that it will be necessary to come to some form of compromise.

The subject of playgrounds does not appear serious at first glance as there is a feeling that the inhabitants of the villages live close to nature and do not need parts and sports facilities for the young. But the high density of building, the spread of the village over large distances and the large number of children on the narrow streets of the village have given rise to a new landscape that did not previously exist. There are increasing demands by parents, especially mothers, for a place to take children and in which older children can play under parental supervision. The conclusion must be that vacant sites need to be sought in the developing Arab village for this purpose also.

A desirable model for the Outline Plan

As the Outline Plans that have been prepared do not stand up under examination of the real situation and as the contribution of planning to the creation of a specific model of Arab villages in Israel has been minimal, a new model must be built, which will provide a common meeting point between the model of the village as it exists at present, expressing the private needs and wants of the villagers, and the theoretical model representing the wider public interest and the benefit of the community in the planning of the village.

The weaknesses in the model of Arab villages as it has

developed thus far have been presented and analysed. The principle weaknesses from the point of view of the public interest and the general good of the village are as follows:

(a) The village spreads over a considerable area, a feature which distorts the compactness of the settlement. This damages the public and planning interest and increases the pressures on additional spread of the built-up area.

(b) The road network is disorganized. The entry into the village is difficult and often dangerous and does not meet the demands of a modern settlement with high rates of motorisation. As a result of surrender to various pressure groups, many residents are discriminated against at the expense of others.

(c) There is no designation of areas for public and educational institutions, and there is no room for playgrounds.

(d) Large areas are set aside for industries despite considerable doubt as to whether they will come to the village in any substantial numbers.

(e) The location of the centre, its power and physical size makes demands on the planner to take into consideration the particular dynamism of this phenomenon.

(f) The spread of the village over a large area also requires that secondary commercial centres be planned.

In the light of all this, an improved version of the planning model for the Arab villages is presented (Figure 20). The main points of this model include:

1. A stellar road network with a ring road, connecting all the roads some distance from the village. A smaller ring road surrounds the village core.

2. At some of the junctions between the large ring road and the longitudinal roads, secondary commercial and service centres will be developed.

3. At various sites in the village, areas for playgrounds and parks will be promised.

4. The industrial area will be sited in relation to the prevailing winds and the topography and its area will answer the varying needs of the Arab sector.

5. Two building zones will be distinguished, the village core

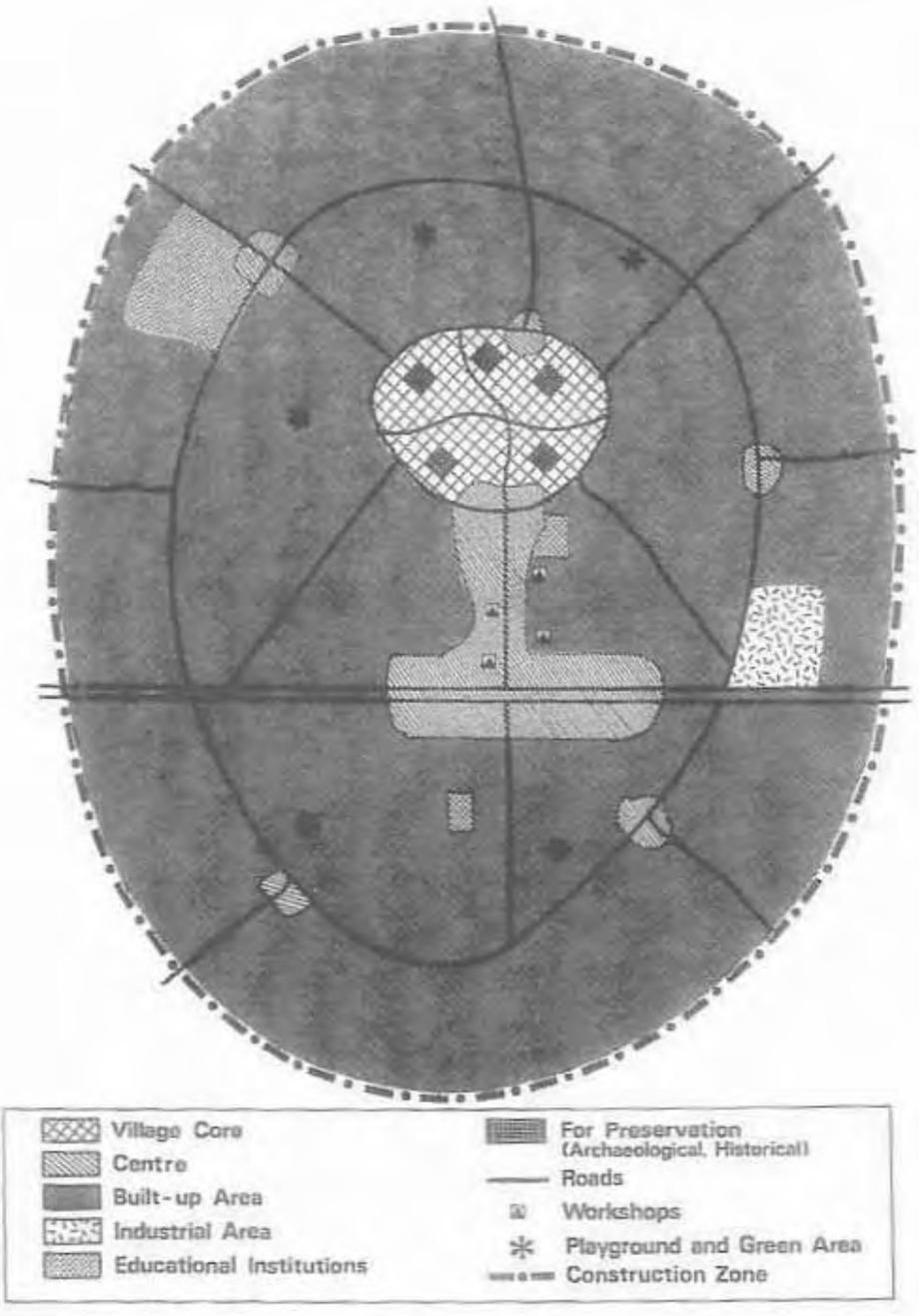

Figure 20. Model of desirable outline plan in an Arab village

with emphasis on architectural preservation and the area between the village core and ring road, in which high-rise building will be permitted.

Notes

1. Margolin, 1970, 6
2. Statistical Abstract, 1975; Survey, Planning Dept., Ministry of the Interior, Nazareth
3. Margolin, 1970
4. Merlin, 1969
5. Alexander, 1965, 578
6. Yom -Tov, 1964
7. Soffer, 1975

Plate 6. From the old core of Yafia (1980). (photo: Botheina Zuabi)

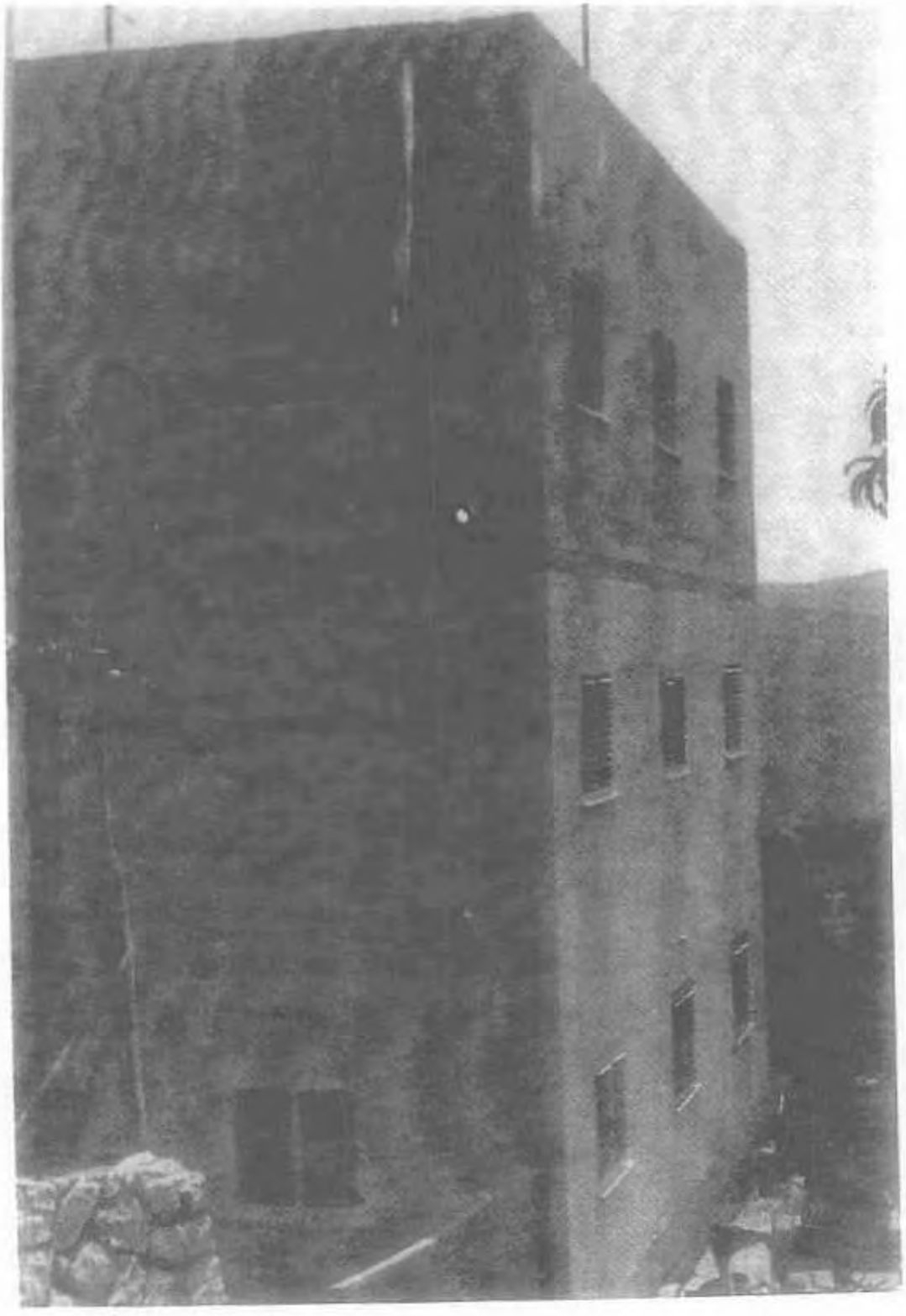

Plate 7. Three storey house in Rama (Lower Galilee) 1978. (photo: Arnon Soffer)

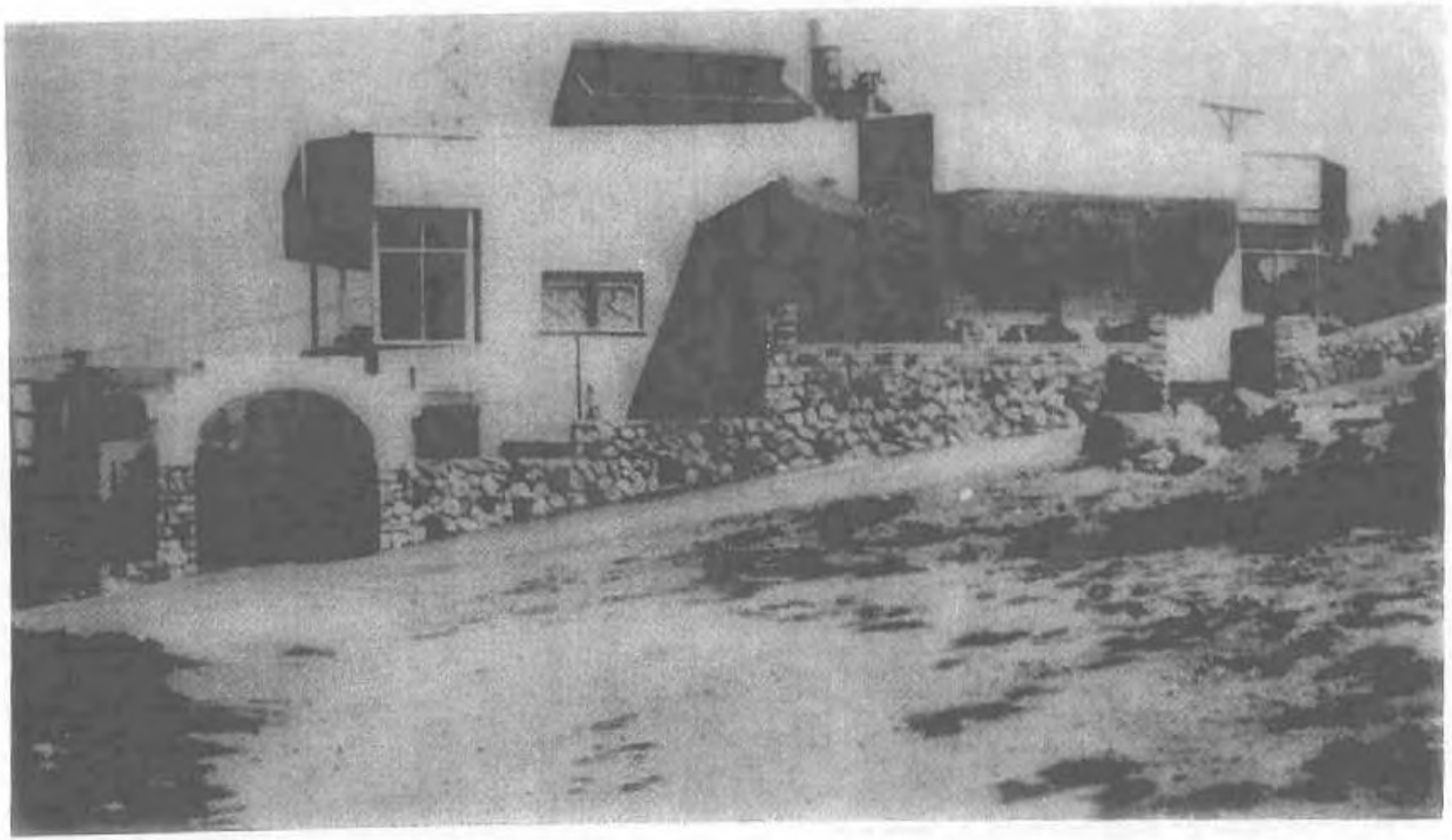

Plate 8. Modern single family dwelling in Yafia (1980). (photo: Botheina Zuabi)

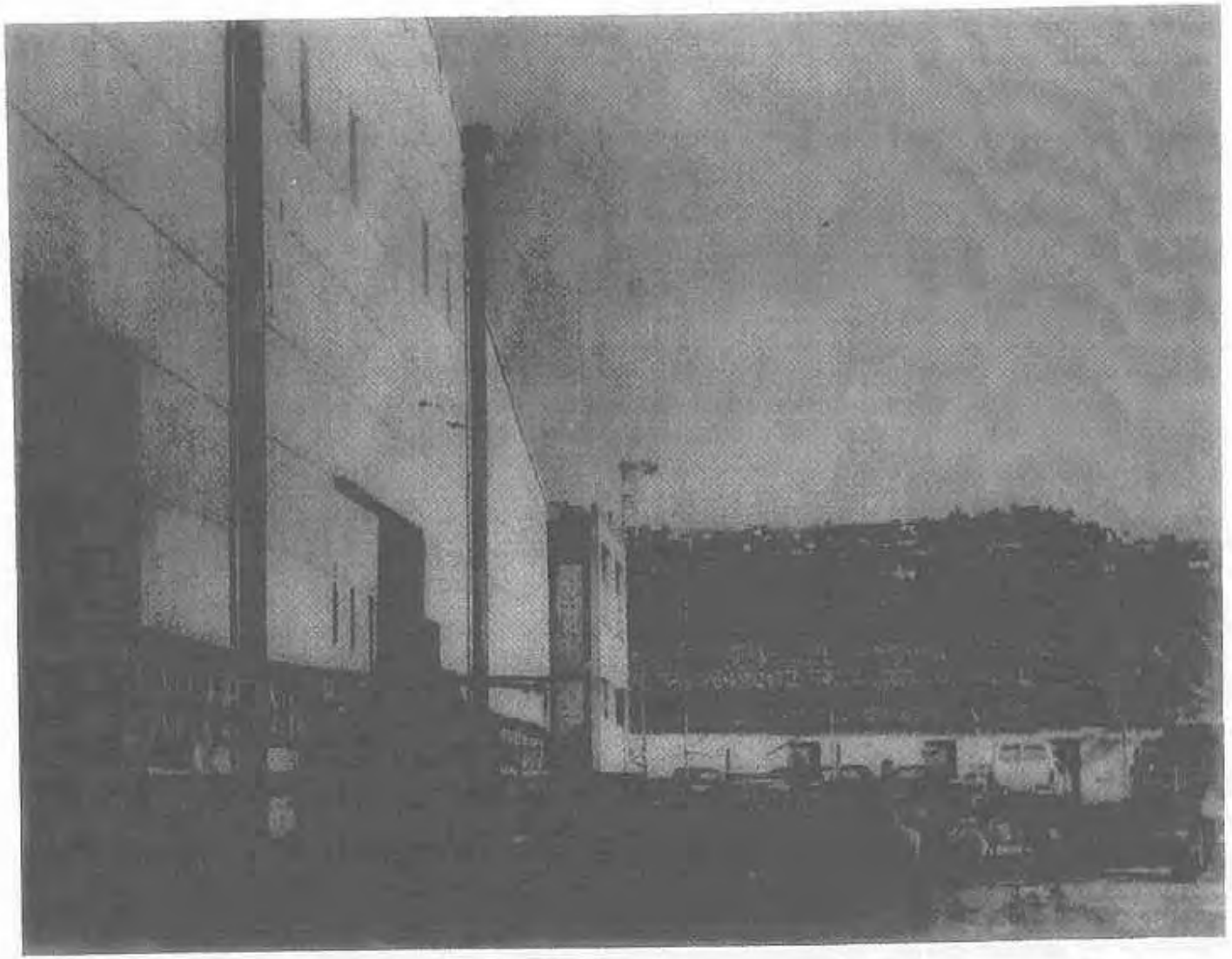

Plate 9. Modern metal factory in the industrial estate of the Druze village of Yirka (Lower Galilee) 1978. (photo: Israeli Press Bureau)

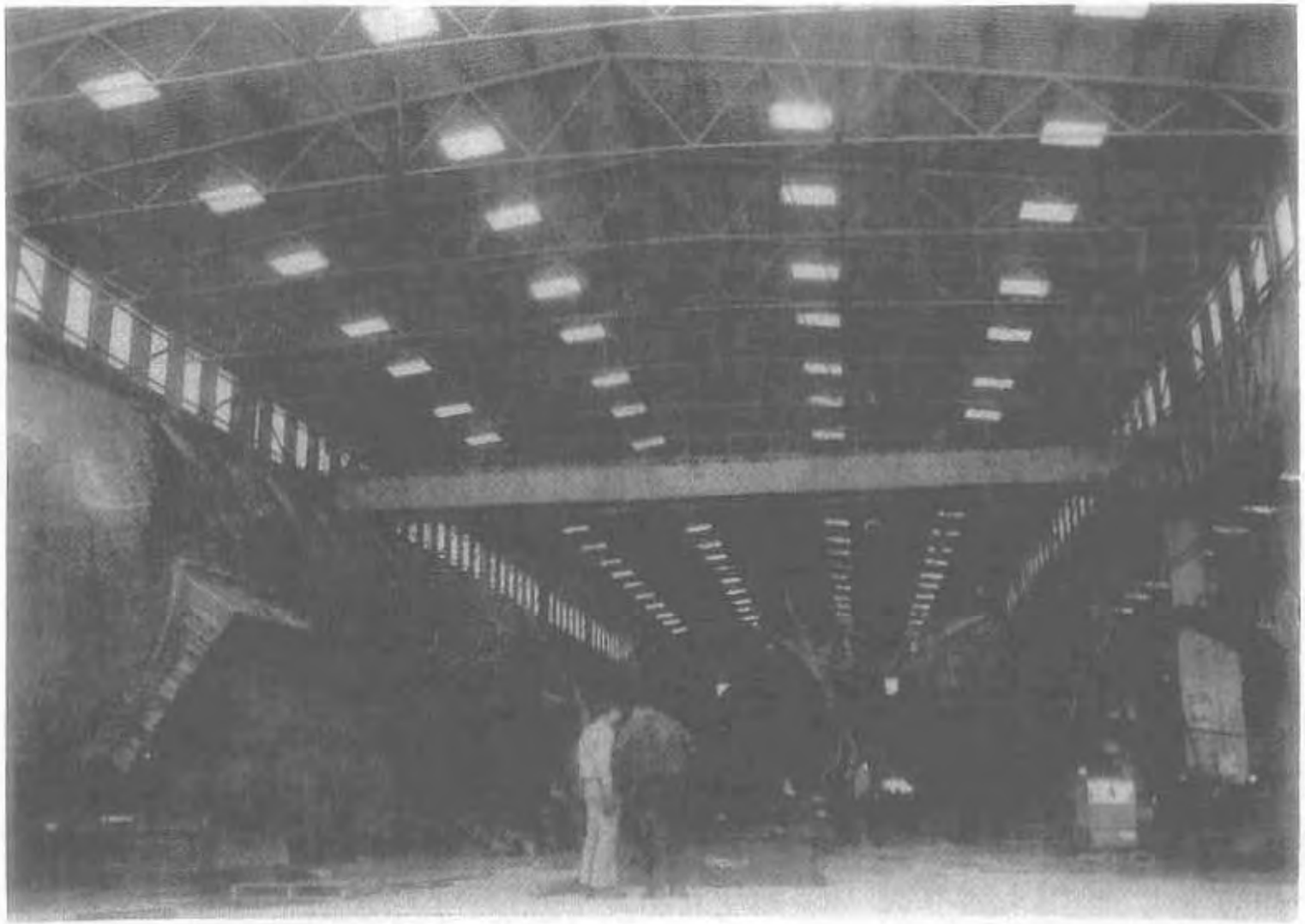

Plate 10. Inside the factory in Yirka, 1978 (photo: Israeli Press Bureau)

6. GENERAL SUMMARY

The processes and developments surveyed above concern a population and settlements that have undergone far-reaching changes in a relatively short period of time. The processes identified in Northern Israel are applicable also to other areas, especially the "Triangle" to the North-east of Tel Aviv. The forces which drive the changes in the villages are both social and political. The social forces include natural growth and upheaval in the structure of the traditional family; the political forces involve both opposition to and integration with the Jewish population.

Notwithstanding the speed of change, it has only become evident in the past few years and its full meaning has not yet been seen in the spatial structure of Northern Israel. Should the Arab-Jewish conflict continue, there will be no spatial integration of the two groups in mixed settlements (by migration from Arab villages to the Jewish towns). Thus, it can be hypothesised that the phenomenon treated in Chapter 4 will continue to develop throughout Northern Israel, in which the settlements undergo a process of metropolitanisation, creating regional towns by the unification of towns and large villages. This phenomenon will make the planning problem all the more serious and further complicate it as a result of the gap created between the reality of the situation and the aspirations of urban planning.

In order to attempt to solve this problem several novel ideas have been proposed, some of which have been implemented. The main points of these ideas include the construction of residential neighbourhoods by central authorities within the framework of strict environmental planning as was the case in the village of Makr east of Acre. A totally different idea is the construction of New Towns in Northern Israel for the Arab population. A plan for such a town already exists east of Acre, and allows for the absorption of excess population; it also meets the rising demand for housing in the villages as a result of high rates of natural increase.

A visitor to these villages returning after an absence of twenty years would be hard-pressed to recognise them, most in many ways resembling suburban areas. Very few of the villages have retained their traditional rural character; even in the smallest villages and Bedouin settlements, modernisation and suburbanisation are seen.

From this aspect it can be said that contact between the western and industrialised Jewish society and the traditional rural Arab

society has brought about the very rapid changes that have taken place. Notwithstanding the political conflict, a certain level of economic integration has taken place, and a material and cultural diffusion has occured from the Jewish to the Arab population. These developments have diminished in certain ways the gap between the two populations in Northern Israel.

As the two populations are neighbours and are even in some ways integrated with one another, it is important that the spatial processes and dynamics of the settlements be recognized so as to facilitate planning to raise levels of prosperity in the present and future. It is to be hoped that this research will aid in recognising the processes and that conclusions can be drawn also for other regions in the Middle East.

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